ORDER NO. SD8001-1656

Service Manual

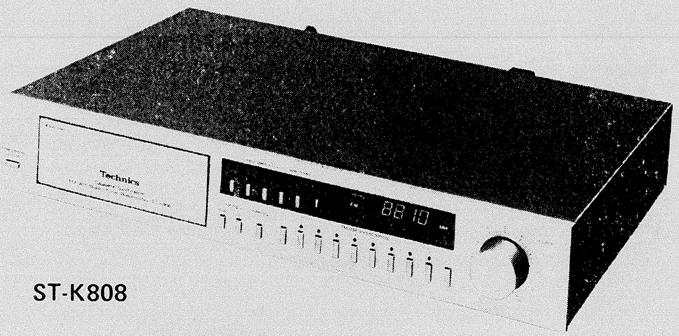
QUARTZ Synthesizer
FM/AM Stereo Tuner Preamplifier

ST-K808

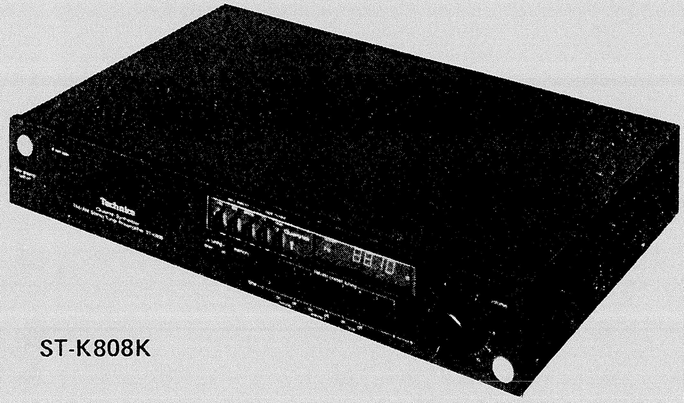
(DX), (DG), (DM), (EB),
(XE), (XGF), (XSW),
(XGH), (XA)

ST-K808(K)

(DX), (DM), (EB),
(XGH), (XSW)



ST-K808



ST-K808K

- * The models ST-K808 (DX)and ST-K808K (DX) are available in Scandinavia and European except Switzerland and Denmark only.
- * The models ST-K808 (DG) and ST-K808K (DG) are availabe in Scandinavia and European except Switzerland only.
- * The models ST-K808 (DM) and ST-K808K (DM) are availabe in Denmark only.
- * The models ST-K808 (EB) and ST-K808K (EB) are available in Belgium only.
- * The model ST-K808 (XE) is available in United Kingdom only.
- * The model ST-K808 (XGF) is available in France only.
- * The models ST-K808 (XSW) and ST-K808K (XSW) are available in Switzerland only.
- * The models ST-K808 (XGH) and ST-K808K (XGH) are available in Holland only.
- * The model ST-K808 (XA) are available in Asia, Latin America, Middle East and Africa only.

TECHNICAL SPECIFICATIONS [DIN 45 500]

Specifications are subject to change without notice for further improvement.

AMPLIFIER SECTION

Total harmonic distortion	0.05%
Input sensitivity and impedance	
PHONO	2.5 mV/47kΩ
AUX	150 mV/27kΩ
TAPE REC/PLAY	180 mV/27kΩ
PHONO maximum input voltage (1 kHz, RMS)	95 mV
S/N	
rated output (4Ω)	
PHONO	75 dB (IHF, A: 78 dB)
TUNER, AUX, TAPE	85 dB (IHF, A: 97 dB)
26 dB output (4Ω)	
PHONO	62 dB
TUNER, AUX, TAPE	63 dB
Frequency response	
PHONO	RIAA standard curve ±1.0 dB (30 Hz~15 kHz)
TUNER, AUX, TAPE	10 Hz~50 kHz (−1 dB) +0.4 dB (20 Hz~20 kHz)
Tone controls	
BASS	50 Hz, +10 dB~−10 dB
TREBLE	20 kHz, +10 dB~−10 dB
Subsonic filter	30 Hz, −6 dB/oct.
High-cut filter	7 kHz, −6 dB/oct.
Loudness control (volume at −30 dB)	50 Hz, +9 dB
Output voltage	
OUTPUT	rated 0.5V/600Ω max. 10V/600Ω
TAPE REC/PLAY	30 mV/82kΩ
Channel balance, AUX 250 Hz~6,300 Hz	±1.0 dB
Channel separation, AUX 1 kHz	55 dB

FM TUNER SECTION

※ Frequency range	87.5~108.0 MHz
Sensitivity	1.9 μV (IHF, usable)
S/N 30 dB	1.9 μV (300Ω), 1.3 μV (75Ω)
S/N 26 dB	1.7 μV (300Ω), 1.2 μV (75Ω)
S/N 20 dB	1.5 μV (300Ω), 0.9 μV (75Ω)
IHF 46 dB stereo quieting sensitivity	20 μV/75Ω
Total harmonic distortion	
MONO	0.15%
STEREO	0.3%
S/N	
MONO	67 dB (73 dB, IHF)
STEREO	63 dB (68 dB, IHF)
Frequency response	20 Hz~15 kHz, +0.5 dB −1.5 dB
Alternate channel selectivity	75 dB
Capture ratio	1.0 dB
Image rejection at 98 MHz	68 dB
IF rejection at 98 MHz	85 dB
Spurious response rejection at 98 MHz	95 dB
AM suppression	55 dB
Stereo separation	
1 kHz	45 dB
10 kHz	35 dB
Carrier leak	
19 kHz	30 dB (−35 dB, IHF)
38 kHz	45 dB (−50 dB, IHF)
Channel balance (250 Hz~6,300 Hz)	±1.0 dB
Limiting point	1.2 μV
Power bandwidth	
IF amplifier	180 kHz
FM demodulator	1000 kHz

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

Antenna terminals	300Ω (balanced) 75Ω (unbalanced)

AM TUNER SECTION

※ **Frequency range**	522 ~ 1611 kHz
Sensitivity (S/N 20 dB)	30 µV, 300 µV/m
Selectivity (±9 kHz)	55 dB
Image rejection at 1,000 kHz	45 dB
IF rejection at 1,000 kHz	45 dB

TIMER SECTION

Clock	Quartz-lock type 24-hour indication
Precision	Within 0 sec ~ +10 sec. monthly (at 25°C)
Functions	24-hour programmable everyday (2 times) once only (1 time)
Programmable content	on/off of program source (FM, AM, PHONO, AUX)
Setting intervals	1 minute ~ 23 hours, 59 minutes (at 1-min. intervals)
Priority order	once, everyday 2, everyday 1
Memory "back-up"	About 3 months (without AC power)

GENERAL

Power consumption	20W
Power supply	AC 50 Hz/60 Hz, 110V/120V/220V/240V
Batteries for memory back-up (optional)	three "AA" size batteries DC 4.5V
Dimensions (W × H × D)	430 × 75 × 310 mm (16-15/16" × 2-15/16" × 12-7/32")
Weight	4.8 kg (10.6 lb.)

※ **Note:**
For some countries, this unit is equipped with an FM/AM frequency-interval selector. (Allocation switch) the specifications shown above ave correct with this switch set to the "FM 50kHz/AM 9kHz" position. If it is set to the "FM 200kHz/AM 10kHz" position, however, the FM frequency range becomes 87.9 ~ 107.9MHz, and the AM frequency range becomes 530 ~ 1620kHz.

TECHNISCHE DATEN

Spezifikationen können infolge von Verbesserungen ohne Ankündigung geändert werden.

[DIN 45 500]

VERSTARKERTEIL

Gesamtklirrfaktor	0.05%
Eingangsempfindlichkeit und -impedanz	
Phono	2.5 mV/47 kΩ
Aux	150 mV/27 kΩ
Tape Aufnahme/Wiedergabe (TAPE REC/PLAY)	180 mV/27 kΩ
Maximale TA-Eingangsspannung (1 kHz, eff.)	95 mV
Geräuschabstand	
Nennausgangsspannung (4 Ω)	
Phono	75 dB (nach IHF, A: 78 dB)
Tuner, Aux, Tape	85 dB (nach IHF, A: 97 dB)
−26 dB Ausgangsleistung (4 Ω)	
Phono	62 dB
Tuner, Aux, Tape	63 dB
Frequenzgang	
Phono	RIAA-Standardkurve ±1.0 dB (30 Hz ~ 15 kHz)
Tuner Aux, Tape	10 Hz ~ 50 kHz(−1 dB) ±0.4 dB (20 Hz ~ 20 kHz)
Klangregler	
Baßregler (BASS)	50 Hz, +10 dB ~ −10 dB
Höhenregler (TREBLE)	20 kHz, +10 dB ~ −10 dB
Tiefenfilter	30 Hz, −6 dB/Okt
Rauschfilter	7 kHz, −6 dB/Okt.
Gehörrichtige Lautstärkekorrektur (Loudness) (bei −30 dB Ausgangsleistung)	50 Hz, +9 dB
Ausgangsspannung	
Ausgang (OUTPUT)	Nennspg. 0.5 V/600 Ω max. 10 V/600 Ω
Tape Aufnahme/Wiedergabe (TAPE REC/PLAY)	30 mV/82 kΩ
Kanalabweichung (Aux, 250 Hz ~ 6300 Hz)	±1.0 dB
Übersprechdämpfung (Aux, 1 kHz)	55 dB

UKW-TUNERTEIL

※ **Wellenbereich**	87.5 ~ 108.0 MHz
Eingangsempfindlichkeit	1.9 µV (nutzbar nach IHF)
S/R 30 dB	1.9 µV (300 Ω), 1.3 µV (75 Ω)
S/R 26 dB	1.7 µV (300 Ω), 1.2 µV (75 Ω)
S/R 20 dB	1.5 µV (300 Ω), 0.9 µV (75 Ω)
Stereoumschaltschwelle bei 46 dB nach IHF	20 µV/75 Ω
Gesamtklirrfaktor	
Mono	0.15%
Stereo	0.3%
Geräuschabstand	
Mono	67 dB (73 dB nach IHF)
Stereo	63 dB (68 dB nach IHF)
Frequenzgang	20 Hz ~ 15 kHz (+0.5 dB ~ −1.5 dB)
Trennschärfe bei Störsender	75 dB
Einfangverhältnis	1.0 dB
Spiegelfrequenz-Dämpfung bei 98 MHz	68 dB
ZF-Dämpfung bei 98 MHz	85 dB
Ansprechdämpfung auf Nebenfrequenzen bei 98 MHz	95 dB
AM-Unterdrückung	55 dB
Übersprechdämpfung	
1 kHz	45 dB
10 kHz	35 dB
Trägerrest	
19 kHz	−30 dB (−35 dB nach IHF)
38 kHz	−45 dB (−50 dB nach IHF)
Kanalabweichung (250 Hz ~ 6300 Hz)	±1.0 dB
Begrenzereinsatz	1.2 µV
Bandbreite	
ZF-Verstärker	180 kHz
UKW-Demodulator	1000 kHz
Antennenanschluß	300 Ω (symmetrisch) 75 Ω (unsymmetrisch)

AM-TUNERTEIL

※ **Wellenbereiche**	522 ~ 1611 kHz
Eingangsempfindlichkeit (S/R 20 dB)	30 µV, 300 µV/m
Trennschärfe (±9 kHz)	55 dB
Spiegelfrequenz-Dämpfung bei 1000 kHz	45 dB
ZF-Dämpfung bei 1000 kHz	45 dB

TIMER

Uhr	Quarzuhr mit 24-Stunden-Anzeige
Genauigkeit	max. 10 Sek./Monat (bei 25°C)
Funktionen	24-Stunden-Programmierung fur taglichen (2-fach) und einmaligen Betrieb (einfach)
Programmierung	Ein- und Ausschalten der Tonquelle (FM, AM, PHONO, AUX)
Einschaltdauer	1 Min. bis 23 Stdn. 59 Min. (in 1-Minuten-Intervallen)
Prioritätenfolge	"once", "everyday 2", "everyday 1"
Sicherung der im Speicher enthaltenen Informationen	etwa 3 Monate (ohne Netzstromversorgung)

ALLGEMEINE DATEN

Leistungsaufnahme	20 W
Netzspannung	Wechselstrom 50 Hz/60 Hz, 110V/120V/220V/240V
Batterien für den Speicher (Sonderzubehör)	drei Batterien "AA" (4.5 V)
Abmessungen (B × H × T)	430 × 75 × 310 mm
Gewicht	4.8 kg

※ **Bemerkung:**
In einigen ländern ist dieses Gerät mit einem UKW/MW intervallgrößenwähler ausgestattet. Die obenstehenden Angaben gelten, wenn der Schalter auf "FM 50kHz/AM 9kHz" steht.
Wenn er aber in der Position "FM 200kHz/AM 10kHz" steht, ändert sich der UKW-Wellenbereich zu 87.9 ~ 107.9MHz und der MW-Wellenbereich zu 530 ~ 1620kHz.

DONNEES TECHNIQUES

Sujet à changement sans préaris.

[DIN 45 500]

SECTION AMPLIFICATEUR

Distorsion harmonique totale	0.05%
Sensibilité et impédance d'entrée	
PHONO	2.5 mV/47kΩ
AUX (AUX)	150 mV/27kΩ
BANDE ENREGISTREMENT/LECTURE (TAPE REC/PLAY)	180 mV/27kΩ
PHONO (tension d'entrée maximum, 1 kHz RMS)	95 mV
Signal/Bruit	
Tension de sortie nominale (4Ω)	
PHONO	75 dB (IHF, A: 78 dB)
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	85 dB (IHF, A: 97 dB)
Sortie de −26 dB (4Ω)	
PHONO	62 dB
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	63 dB
Réponse de fréquence	
PHONO	Courbe nominale RIAA ±1.0 dB (30 Hz~15 kHz)
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	10 Hz~50 kHz (−1 dB) ±0.4 dB (20 Hz~20 kHz)
Réglage de la tonalité	
BASSES (BASS)	50 Hz, +10 dB~ −10 dB
AIGUS (TREBLE)	20 kHz, +10 dB~ −10 dB
Filtre subsonique	30 Hz, −6 dB/oct
Filtre coupe-hauts	7 kHz, −6 dB/oct.
Compensateur physiologique (volume à −30 dB)	50 Hz, +9 dB
Tension de sortie	
SORTIE (OUTPUT)	nominale 0,5V/600Ω maxi. 10V/600Ω
ENREGISTREMENT/LECTURE BANDE (TAPE REC/PLAY)	30mV/82kΩ
Equilibrage des canaux, AUX 250 Hz~6 300 Hz	±1,0 dB
Séparation des canaux, AUX 1 kHz	55 dB

SECTION SYNTONISATEUR FM

※ **Gamme de fréquence**	87,5~108,0 MHz
Sensibilité	1,9 µV (IHF utilisable)
S/B 30 dB	1,9 µV (300Ω), 1,3 µV (75Ω)
S/B 26 dB	1,7 µV (300Ω), 1,2 µV (75Ω)
S/B 20 dB	1,5 µV (300Ω), 0,9 µV (75Ω)
Sensibilité stéréo au seuil de 46 dB, IHF	20 µV/75Ω
Distorsion harmonique totale	
MONO	0,15%
STEREO	0,3%
Signal/Bruit	
MONO	67 dB (73 dB, IHF)
STEREO	63 dB (68 dB, IHF)
Réponse de fréquence	20 Hz~15 kHz, +0,5 dB~ −1,5 dB
Sélectivité alternée par canal (±400 kHz)	75 dB
Taux de capture	1,0 dB
Rejection d'image à 98 MHz	68 dB
Rejection FI à 98 MHz	85 dB
Rejection de réponse parasite à 98 MHz	95 dB
Suppression AM	55 dB
Séparation stéréophonique	
1 kHz	45 dB
10 kHz	35 dB
Fuite de porteuse	
19 kHz	−30 dB (−35 dB, IHF)
38 kHz	−45 dB (−50 dB, IHF)
Equilibrage de canaux (250 Hz~6,300 Hz)	±1,0 dB
Point de limite	1,2 µV
Largeur de bande	
Amplificateur FI	180 kHz
Démodulateur FM	1000 kHz
Bornes d'antenne	300Ω (symétrique) 75Ω (asymetrique)

SECTION SYNTONISATEUR AM

※ **Gamme de fréquence**	522 ~ 1611 kHz
Sensibilité (S/B 20 dB)	30 µV, 300 µV/m
Sélectivité (±9 kHz)	55 dB
Réjection d'image à 1,000 kHz	45 dB
Réjection FI à 1,000 kHz	45 dB

PROGRAMMATEUR

Horloge	Du type verrouillage à quartz Affichage basé sır le système des 24 heures
Précision	Marge de 0 à +10 secondes. mensuellement (à 25°C)
Fonctions	Programmations possibles sur 24 heures tous les jours (deux fois). une fois seulement (une fois)
Eléments de programmation	Programmation de sources sonores (marche/arrêt) (FM, AM, PHONO, AUX)
Intervalles de réglage	De 1 minute à 23 heures, 59 minutes (par intervalles de 1 minute)
Ordre de priorité	"once" (une fois), "everyday 2" (tous les jours 2), "everyday 1" (tous les jours 1)
Durée des fonctions de mémoire	Environ 3 mois (sans alimentation CA)

DIVERS

Consommation	20W
Alimentation	CA 50 Hz/60 Hz, 110V/120V/220V/240V
Piles pour préservation des mémoires (en option)	trois piles de type AA (C.C.: 4,5 V)
Dimensions (L·H·Pr)	430 × 75 × 310 mm
Poids	4,8 kg

※ **Nota:**
Cet appareil est doté, pour certains pays, d'un sélecteur d'intervalle de fréquence FM/AM. Les spécifications-indiquées ci-dessus sont applicables si ce sélecteur est sur la position "FM 50kHz/AM 9kHz". S'il est sur la position "FM 200kHz/AM 10kHz", les gammes de fréquence FM et AM deviennent respectivement 87.9 ~ 107.9MHz et 530 ~ 1620kHz.

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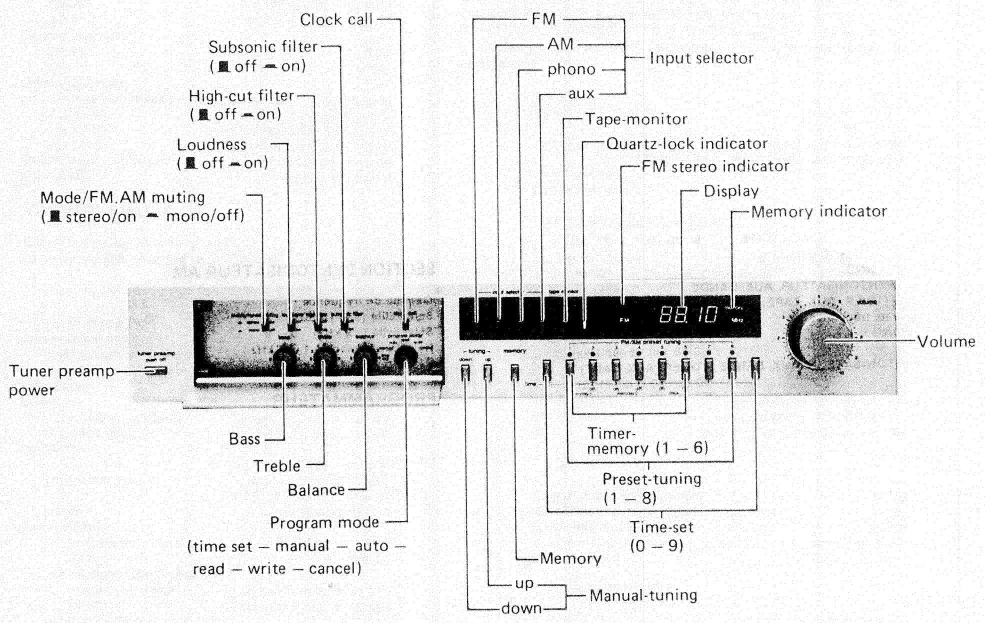
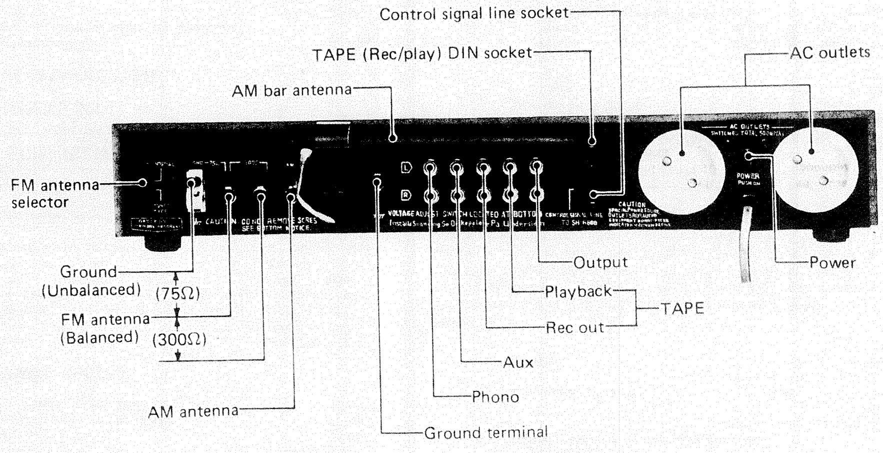
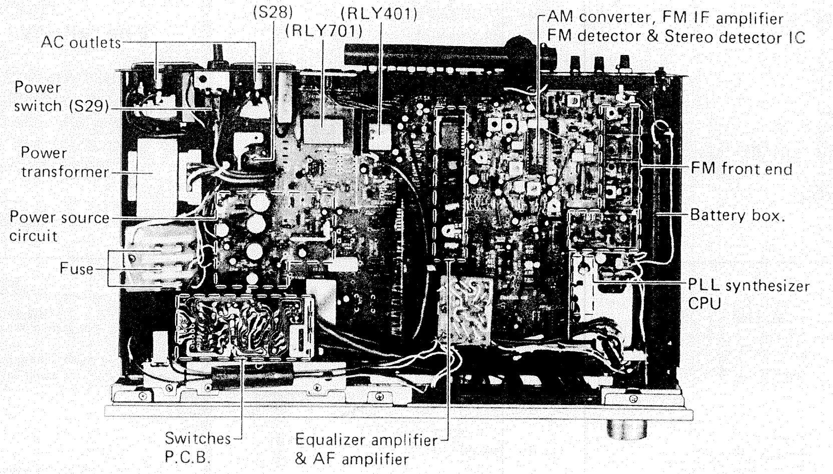
■ LOCATION OF CONTROLS


Clock call
Subsonic filter
(■ off ▬ on)
High-cut filter
(■ off ▬ on)
Loudness
(■ off ▬ on)
Mode/FM.AM muting
(■ stereo/on ▬ mono/off)
FM
AM
phono
aux
Input selector
Tape-monitor
Quartz-lock indicator
FM stereo indicator
Display
Memory indicator
Volume
Tuner preamp power
Bass
Treble
Balance
Program mode
(time set – manual – auto – read – write – cancel)
Timer-memory (1 – 6)
Preset-tuning (1 – 8)
Time-set (0 – 9)
Memory
up
down
Manual-tuning


Control signal line socket
TAPE (Rec/play) DIN socket
AM bar antenna
AC outlets
FM antenna selector
Ground (Unbalanced)
(75Ω)
FM antenna (Balanced)
(300Ω)
AM antenna
Output
Playback
Rec out
TAPE
Aux
Phono
Ground terminal
Power

* This photo shows only the products for (DM).


(S28)
(RLY401)
(RLY701)
AC outlets
Power switch (S29)
Power transformer
Power source circuit
Fuse
AM converter, FM IF amplifier
FM detector & Stereo detector IC
FM front end
Battery box.
PLL synthesizer CPU
Switches P.C.B.
Equalizer amplifier & AF amplifier

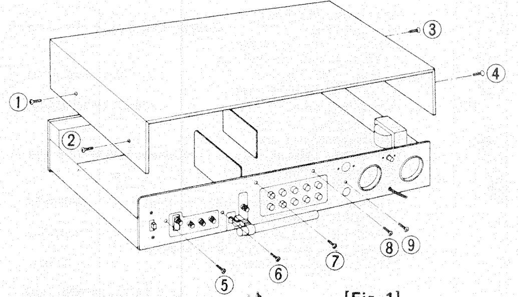
■ DISASSEMBLY INSTRUCTIONS

• How to check the printed circuit board

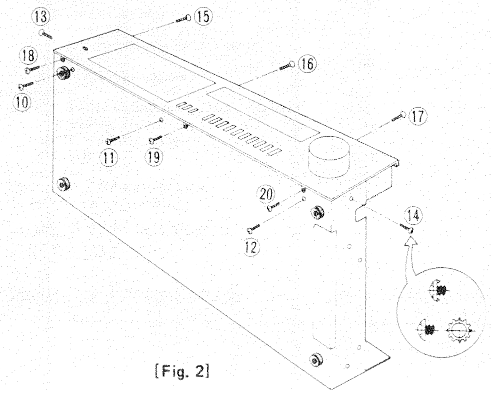
1. Remove the 4 setscrews (① ～ ④ in Fig. 1) of the cabinet.
2. Remove the 5 setscrews (⑤ ～ ⑨ in Fig. 1) on the back of the set.
3. Remove the 3 setscrews (⑩ ～ ⑫ in Fig. 2) on the back of the set.
4. Remove the 2 setscrews (⑬ ～ ⑭ in Fig. 2) on the side of the set.

   (Note) Setscrews ⑬ and ⑭ involve the function of toothed washer (See Fig. 2 [I]: part No. XTBS3+8BFZ1). Therefore, handle them with special care.

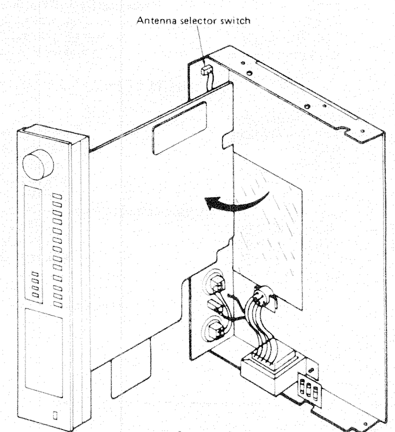
   When replacing these setscrews, use setscrews and toothed washers. (See Fig. 2 [II]: part No. XTB3+8BFZ & XWC3B)
5. Remove the 5 setscrews of the printed circuit board.
6. Place the set as shown in Fig. 3, and then shift the chassis and printed circuit board as illustrated.



[Fig. 1]


⑬
⑮
⑱
⑯
⑩
⑰
⑪
⑲
⑳
⑭
⑫

[Fig. 2]


Antenna selector switch

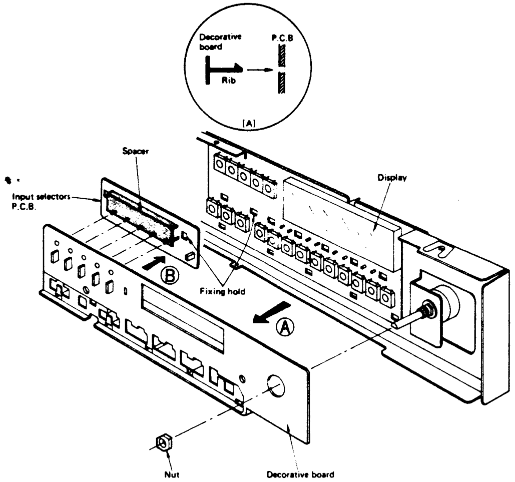
[Fig. 3]

•How to remove the preset, tuning, memory and selector switches, and indicator.

1. Remove the cabinet.
2. Remove the 6 setscrews (⑮ ~ ⑳ in Fig. 2) of the front panel.
3. Remove the decorative board fixing nuts. (Fig. 4)
4. Remove the decorative board from the printed circuit board (in the direction of the arrow Ⓐ in Fig. 4).
   To mount the decorative board onto the printed citcuit board, insert the decorative board ribs into the 12 fixing holes of the printed circuit board. (See Fig. 4 [A].)

• Removal of the selector indicator - - - - -

Remove the selector indicator printed board from the decorative board (in the direction of the arrow Ⓑ in Fig. 4).

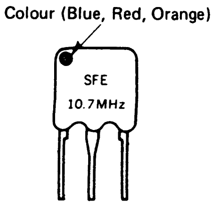

Decorative board
P.C.B
Rib
[A]
Spacer
Input selectors P.C.B.
Display
Ⓑ
Fixing hold
Ⓐ
Nut
Decorative board

[Fig. 4]

■ PRECAUTIONS FOR REPAIR

• Ceramic filters (CF101, CF102 and CF103) used in pair.

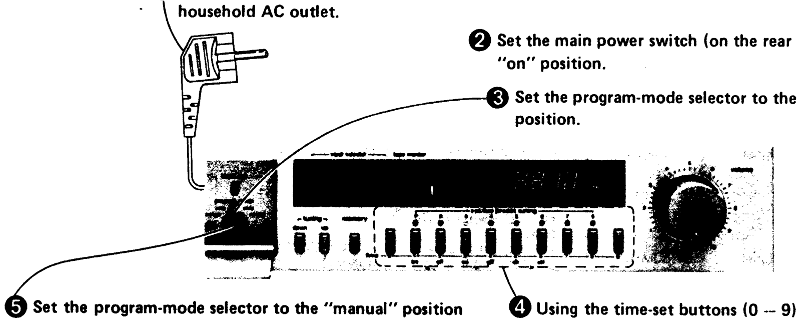
The ceramic filters for the FMIF circuit are available in 3 ranks. Ceramic filters of the same rank must be used in pair for this unit. Take special care when preforming repair or replacement because the diodes (D936, D937) and the crystal adjustment frequency are different in accordance with the rank of ceramic filters used.


Colour (Blue, Red, Orange)
SFE
10.7MHz

Colour	D936	D937	Adjustment frequency
Blue	X	X	98.1751MHz
Red	O	O	98.2001MHz
Orange	X	O	98.2251MHz

Note:
O Diode is used.
X Diode is not used.

■ SETING THE DISPLAY TO THE PRESENT TIME



❶ Connect the power cord plug of this unit to an ordinary household AC outlet.

❷ Set the main power switch (on the rear panel) to the "on" position.

❸ Set the program-mode selector to the "time set" position.

❹ Using the time-set buttons (0 – 9), press the four buttons (in order) corresponding to the correct present time.

Examples:

Press 0 - 8 - 0 - 0 to set the clock to 8:00 A.M.

Press 1 - 9 - 0 - 5 to set the clock to 7:05 P.M.

To set the clock to 8:00 A.M., press the buttons in the order illustrated below.

0 [0 :] → 8 [08:] → 0 [08:0] → 0 [08:00]

Note:

If any button is pressed in error, first complete a setting of four digits, and then make the correct setting of four digits once again from the beginning.

❺ Set the program-mode selector to the "manual" position when a time signal (from radio or telephone) is heard.

(The correct time – [08:00] – will appear on the display.)

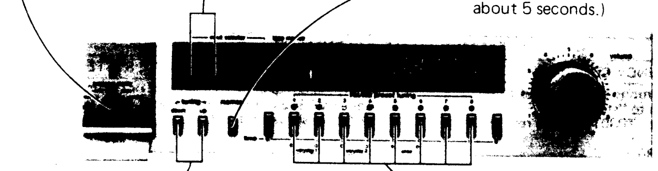
Note:

When the program-mode selector is set to the "manual" position when setting the time while listening to a radio broadcast, the frequency of the radio broadcast will appear on the display.

Notes:

1) The clock will begin operation instantly when the programmode selector is set to the "manual" position.
2) It may happen that no sound will be heard if, during radio broadcast reception or a disc performance, the program-mode selector is set to the "time set" position. If this happens, return the program-mode selector to the "manual" position, and then once again set it to the "time set" position.

■ HOW TO PRESET RADIO BROADCAST FREQUENCIES



❶ Set the program-mode selector to the "manual" position.

❷ To preset an FM station: press the "FM" button.
To preset an AM station: press the "AM" button.

❸ Press the appropriate tuning button to tune to the desired broadcast.

("up" for a higher frequency or "down" for a lower frequency)

❹ Press the memory button.

(The memory indicator will illuminate for about 5 seconds.)

❺ While the memory indicator is illuminated, press the preset-tuning button (1 ~ 8) which you want to use for that station.

When the button is pressed, the memory indicator illumination will stop, and the pre-setting is complete.

Note:

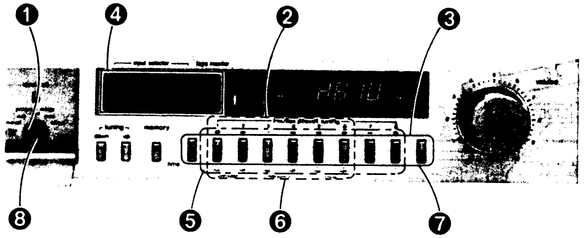
If the memory indication illumination stops before you press the button, once again repeat step ④ and than step ⑤.

This completes the procedures for presetting radio broadcast frequencies. The other preset-tuning buttons can be preset in the same way by following steps ② through ⑤.

Note:

If a new frequency is preset for a button which had already been preset, the previous setting will be cancelled.

■ HOW TO PROGRAM THE TIMER



Before programming the timer, be sure to follow the steps below.

1. Set the timer to the correct present time.
2. Preset radio broadcast frequencies into this unit.

❶ Set to the "write" position.

(The timer will show the present time.)

❷ Select the desired type of timer operation.

Select either "everyday 1", "everyday 2" or "once", and press the coresopnding "on" button.

If, for example, "once" is selected, press the "on" button for "once" operation.

❸ Program the power turn-on time by using four digits.

*Examples: 12:05 A.M. . . . . . . .0 - 0 - 0 - 5
7:45 A.M. . . . . . . .0 - 7 - 4 - 5
7:05 P.M. . . . . . . .1 - 9 - 0 - 5

(Press each button in the order shown above.)

❹ Select the desired program source.

*FM broadcast . . . . .Press the "FM" button.
*AM broadcast . . . . .Press the "AM" button.
*Tape recorder operation . . . . . . .Press the "phono" button.
*To use equipment connected to the auxiliary input terminals. ("AUX") . . . . Press the "aux" button.

If the "FM" button or the "AM" button is pressed:
The indicator above that button will illuminate, and the time that the power will be turned on will be shown on the display.

If the "phono" button or the "aux" button is pressed:
The indicator above that button will illuminate for a moment, and the present time will be shown on the display.

❺•Press the preset-tuning button which corresponds to the FM or AM broadcast station that you want to hear.

When the button is pressed:
The indicator above that button will illuminate for a moment, and the present time will be shown on the display.

•For tape recorder operation or the listen to equipment connected to the auxiliary input terminals, prepare the tape recorder or such equipment for operation.

[This step ❺ can also be made after steps ❻ through ❽ to program the timer.]

Preparations for tape playback (using tape deck Technics model RS-M45):

(A) Press the tape-monitor switch, so that the indicator above it illuminates.
Note that, when this indicator is illuminated, no disc or radio sound will be heard if the unit is being used in the ordinary (non-memory-programmed) way.

(B) Prepare the tape deck for operation. Set the timer standby switch of the tape deck to the "on" position.

Note:

1. Break out the erase-prevention tab (s) of the tape cassette, so that a recording cannot be accidentally made on it.
2. If the power is interrupted for any reason, such as a power failure, note that the tape-monitor switch will return to the "source" function (the indicator will not be illuminated).

❻ Press the "off" button corresponding to the type of timer operation selected in step ❷.

❼ Program the power turn-off time.

*The method of programming is the same as described in step ❸.

*Examples: 11:45P.M . . . . . 2 – 3 – 4 – 5.

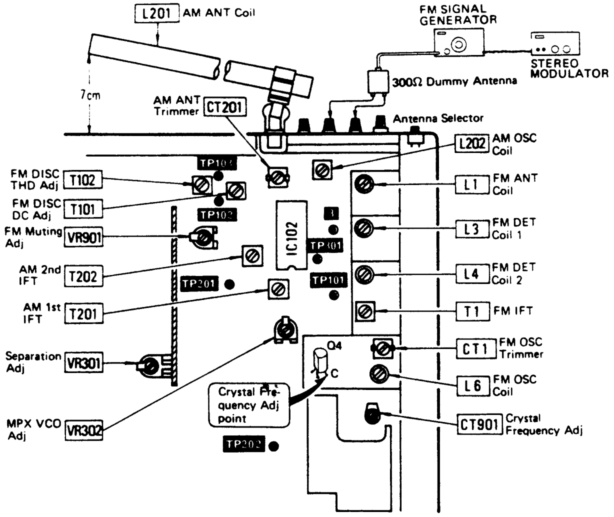
After these numbers are displayed, the display will then immediately show the correct present time.

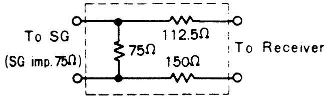
> If a wrong button is pressed accidentally, finish pressing the four numbers, repeat step ❻, and then press the four correct numbers.

❽ Set to the "auto" position.

The power of the desired sound source will then be turned on and off at the programmed times.
(The correct present time will be shown on the display.)

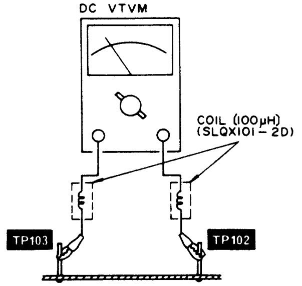
■ ALIGNMENT POINTS


L201 AM ANT Coil
FM SIGNAL GENERATOR
STEREO MODULATOR
300Ω Dummy Antenna
7cm
AM ANT Trimmer CT201
Antenna Selector
L202 AM OSC Coil
TP103
FM DISC THD Adj T102
FM DISC DC Adj T101
TP102
FM Muting Adj VR901
IC102
TP301
L1 FM ANT Coil
L3 FM DET Coil 1
AM 2nd IFT T202
TP201
TP101
L4 FM DET Coil 2
AM 1st IFT T201
T1 FM IFT
Separation Adj VR301
Q4
C
CT1 FM OSC Trimmer
L6 FM OSC Coil
Crystal Frequency Adj point
MPX VCO Adj VR302
CT901 Crystal Frequency Adj
TP202

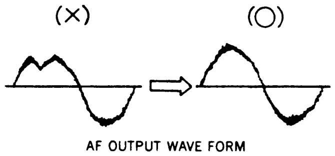

To SG
(SG imp.75Ω)
75Ω
112.5Ω
150Ω
To Receiver

300Ω FM Dummy Antenna

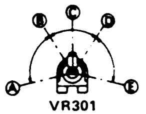
[Fig. 5]
(Abb. 1)


DC VTVM
COIL (100μH)
(SLQX101 – 2D)
TP103
TP102

[Fig. 6]
(Abb. 2)

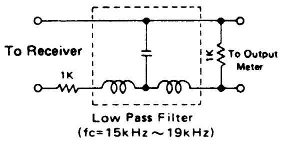

(X)
(O)
AF OUTPUT WAVE FORM

[Fig. 7]
(Abb. 3)


A
B
C
D
E
VR301

A – B, D – E: Stereo OFF Position.
B – D: Stereo ON Position (Indicator Lighting).
C: Adjust Point of Pilot Circuit.

[Fig. 8]
(Abb. 4)


To Receiver
1K
1K
To Output Meter
Low Pass Filter
(fc=15kHz ~ 19kHz)

[Fig. 9]
(Abb. 5)

■ ALIGNMENT INSTRUCTIONS ENGLISH

Notes:

1. Band selector switch ·········· {AM (AM Alignment) / FM (FM Alignment)
2. Mode/FM. AM muting switch . . . . .mono/off
3. Program-mode selector switch. . . . . .manual
4. FM Antenna selector switch . . . . .NORMAL
5. Maintain line voltage at rated voltage
6. 300Ω FM dummy antenna . . . . . . Refer to fig. 5.
7. Output of signal generator should be on higher than necessary to obtain an output reading.

	AM/FM SIGNAL GENERATOR		FREQUENCY SETTING	INDICATOR (VTVM or SCOPE)	ADJUSTMENT POINTS	REMARKS
	CONNECTION	FREQUENCY				
	AM ALIGNMENT					
1	High side to TP3 terminal. Common to chassis.	450kHz (30% Mod. with 400Hz)	Point of non-inter-ference	Connect AC VTVM or scope to "REC OUT" terminal.	T201 (1st IFT) T202 (2nd IFT)	Adjust for maximum output.
2	Fashion loop of several turns of wire and radiate signal into loop of tuner.	531kHz (30% Mod. with 400Hz)	531kHz	Connect DC VTVM to TP202 terminal.	L202 (OSC Coil)	Adjust L202 to 1.0 ± 0.05V.
3	Fashion loop of several turns of wire and radiate signal into loop of tuner.	612kHz (30% Mod. with 400Hz)	612kHz	Connect AC VTVM or scope to "REC OUT" terminal.	L201 (ANT Coil)	Adjust for maximum output. Adjust ferrite core of L201 by screw driver.
4	Fashion loop of several turns of wire and radiate signal into loop of tuner.	1503kHz (30% Mod. with 400Hz)	1503kHz	Connect AC VTVM or scope to "REC OUT" terminal.	CT201 (ANT Trimmer)	Adjust for maximum output. Repeat the steps (3) and (4).
	FM IF ALIGNMENT					
5		No-Signal	Point of non-inter-ference	Connect DC VTVM to TP102, TP103 terminals (Refer to fig. 6)	T101 (DISCRI IFT)	1. Mode/FM, AM muting switch "stereo/on" position. 2. Adjust T101 core so that voltage measured in signal mode is 0V in 300mV range.
	CRYSTAL FREQUENCY ALIGNMENT					
6		No-Signal	87.50MHz	Connect DC VTVM to Antenna terminals (75Ω terminal)	L6 (OSC Coil)	1. Set the Antenna selector switch to "TUNED TYPE" position. 2. Adjust L6 (OSC Coil) to 3.0V.
7		No-Signal	87.50MHz	Connect frequency counter to Collector of Q4. **Note:** Adjustment frequency are different in accordance with the colour of ceramic filters (CF101 ~ CF103) used.	CT901 (Crystal frequency)	Adjust CT901 to 98.1751MHz, 98.2001 MHz or 98.2251MHz. Colour – Frequency Blue – 98.1751MHz Red – 98.2001MHz Orange – 98.2251MHz
	FM RF ALIGNMENT					
8	Connect to FM 300Ω antenna terminal through 300Ω. FM dummy antenna.	90.10MHz (100% Mod. with 400Hz) weak input	90.10MHz	Connect scope to "REC OUT" terminal.	L3 (RF DET Coil, 1st) L4 (RF DET Coil, 2nd) L1 (ANT Coil) T1 (FM IFT)	1. Add weak input so that noise is included in the output wave from. 2. Make the adjustment so that the output wave form is vertically symmetrical. Refer to fig. 7. 3. Repeat the steps (8) and (9).
9		106.10MHz (100% Mod. with 400Hz)	106.10MHz	Connect scope to "REC OUT" terminal.	CT1 (OSC Trimmer)	
	FM MONO DISTORTION ALIGNMENT					
10	Connect to FM 300Ω antenna terminal through 300Ω FM dummy antenna.	100.10MHz (100% Mod. with 400Hz, 60dB)	100.10MHz	Connect distortion meter to "REC OUT" terminal (L or R) through low pass filter (Refer to fig. 9)	T102 (DISCRI IFT)	1. Set the Mode/FM.AM muting switch to "stereo/on" and then check step (5) in no signal mode. 2. If it is deflected, readjust of T101. 3. Adjust T102 core so that distortion of left and right channels are minimized.
	FM MUTING LEVEL ALIGNMENT					
11	Connect to FM 300Ω antenna terminal through 300Ω FM dummy antenna. Apply 16dB (6.3μV) to tuner.	100.10MHz (100% Mod. with 400Hz)	100.10MHz		VR901 (Muting Level)	1. Set the Mode/FM. AM muting switch to "mono/off" and then tune in 100.10MHz. 2. With the Mode/FM. AM muting switch set to "stereo/on", adjust VR901 so that the output is given with muting condition released.
	FM MPX PILOT ALIGNMENT					
	USING A FREQUENCY COUNTER			USING ALTERNATE SYSTEM		
12	1. 100.10MHz Non-modulated mono signal applied to set. 2. Mode/FM.AM muting switch to "stereo/on". 3. Connect frequency counter to TP301 through resistor (100kΩ). 4. Adjust VR302 to 19kHz, ± 30Hz.			1. Apply stereo signal from generator or stereo station to tuner. 2. Adjust VR302 until stereo indicator lights up. Cement arm of VR302 as shown in fig. 8.		
	FM SIGNAL GENERATOR		FREQUENCY SETTING	INDICATOR	ADJUSTMENT POINTS	REMARKS
	CONNECTION	FREQUENCY				
	SEPARATION ALIGNMENT					
13	Connect to FM 300Ω antenna terminal through 300Ω FM dummy antenna.	100.10MHz (1kHz 30%, Pilot 10% modulation 60dB stereo signal)	100.10MHz	Connect AC VTVM to "REC OUT" terminal (L or R) through low pass filter (Refer to fig. 9)	VR301 (Separation Alignment)	1. Set the Mode/FM. AM muting switch to "stereo/on", and then tuin in 100.10MHz. 2. Adjust VR301 so that R output is minimized when stereo modulator is in L (Lch. modulation) mode and that L output is minimized in R mode.

ANWEISUNGES FÜR ABGLIEICHUNG DEUTSCH

(Für Deutschland)

Anmerkungen:

1. Bereichsschalter · · · · · · · · · · · · · · {AM (MW Abgleich) / FM (UKW Abgleich)}
2. Betriebsarten-/Stummabs timmschalter. . . mono/off
3. Programmierschalter . . . . .manual
4. Antennenan Schalter . . . . .NORMAL
5. Netzspannung auf ihren Sollwert halten.
6. UKW-Kunstantenne, 300 ohm . . . . Vgl Abb. 1.
7. Der Ausgang des Meßsenders darf nicht höher sein als unbedingt notwendig für eine gute Ablesung.

	MW/UKW MESSENDER		FREQUENZ STELLUNG DES TUNER	ANZEIGEGEIRÄT (Röhrenvoltmeter oder Oszillograph ozw. Klirrfaktor-Meßgerät)	ABGLEICHS-PUNKTE	BEMERKUNGEN
	ANSCHLUSS	FREQUENZ				
	MW-ABGLEICH					
1	Hohe Seite zur Klemme TP3 Kaltes Ende an Masse	450kHz (400Hz Modulat., 30%)	Kein Empfang	Wechselstrom Rõhrenvoltmeter oder Oszillograph über den Ausgang. "REC OUT" schließen	T201 (1. IFT) T202 (2. IFT)	Auf max. Ausgang abgleichen.
2	Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	531kHz (400Hz Modulat., 30%)	531kHz	Elektronisches GS-Voltmeter an Klemmen TP202 anschließen.	L202 (Osc. Spule)	L202 auf 1.0 ± 0.05V justieren.
3	Das Meßsendersignal induktiv in den. Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	612kHz (400Hz Modulat., 30%)	612kHz	Wechselstrom Röhrenvoltmeter oder Oszillograph über den Ausgang "REC OUT" scheißen.	L201 (Ant. Spule)	Auf max. Ausgang abgleichen. Den Ferritkern von L201 mit einem Schraubendreher justieren.
4	Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	1503kHz (400Hz Modulat., 30%)	1503kHz	Wechselstrom Rõhrenvoltmeter oder Oszillograph über den Ausgang "REC OUT" scheißen.	CT201 (Ant. Trimmer)	Auf max. Ausgang abgleichen. Schritt (3) und (4) sing. zu wiederholen.
	UKW-ZF-ABGLEICH					
5		Kein Signal	Kein Empfang	Elektronisches (GS-Voltmeter an Klemmen TP102 und TP103 anschließen. (Vgl Abb. 2)	T101 (Diskriminator IFT)	1. Betriebsarten-/Stummabstimmschalter auf "stereo/on". 2. Den Kern von T101 so justieren, daß die gemessene Spannung im signallosen Modus 0V im 300mV Bereich beträgt.
	KRISTALLFREQUENZABGLEICHUNG					
6		ohne Signal	87.50MHz	DC VTVM an Antennenklemmen (75 Ohm-Klemme) anschließen.	L6 (OSC-Spule)	1. Antennenwahlschalter auf die Stellung "TUNED TYPE" stellen. 2. L6 (OSC-Spule) auf 3.0V einstellen.
7		ohne Signal	87.50MHz	Frequenzmesser an Kollektor von Q4 anschließen. **Anm.:** Abgleichsfrequenz ist von der Farbe des verwendeten Keramischen Filters (CF101 ~ CF103) abhängig.	CT901 (Kristallfrequenz)	CT901 auf 98.1751MHz, 98.2001MHz oder 98.2251 MHz einstellen. Farbe · — Frequenz Blau — 98.1751MHz Rot — 98.2001MHz Orange — 98.2251MHz
8	Meßsender über eine. Kunstantenne an den UKW-Antenneneingang schließen	90.10MHz (400Hz Modulat., 100%)	90.10MHz	Oszillograph über den Ausgang "REC OUT" schließen.	L3 (1. Det. Spule) L4 (2. Det. Spule) L1 (Ant. Spule) T1 (UKW IFT)	1. Einen schwachen Eingang geben, bei den Geräusch in der Ausgangswellenform enthalten wird. 2. So einstellen, daß die Ausgangswellenform vertikal symmertrisch wird. (Avv. 3) 3. Die Einstellung von (8) und (9) wiederhoten, bis die Frequenz mit der Skalle übereinstimmt.
9	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	106.10MHz (400Hz Modulat., 100%)	106.10MHz	Oszillograph über den Ausgang "REC OUT" schließen.	CT1 (Osc. Trimmer)	
	ABGLEICH AUF MIN. VERZERRUNG IN STELLUNG UKW-MONO					
10	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	100.10MHz (400Hz Modulat., 100%) 60dB)	100.10MHz	Klirraktor-Meßbrücke über den Ausgang "REC OUT" schließen.	T102 (Diskriminator IFT)	1. Betriebsarten-/Stummabstimmschalter auf "stereo/on" stellen dann in signalloser Mode den Schritt (5) feststellen. 2. Wenn Abweichung vorliegt. A (primäre Seite) von T101 wieder einstellen. 3. T102 Kern für minimale Verzerrung der rechten und linken Kanäle justieren.
	UKW-MUTING-ABGLEICH					
11	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. Meßsender auf 16dB (6.3μV) einstellen.	100.10MHz (400Hz Modulat., 100%)	100.10MHz		VR901 (UKW-Muting)	1. Den Betriebsarten-/Stummabstimmschalter auf "mono/off", und auf 100.10MHz abstimmen. 2. Betriebsarten-/Stummabstimmschalter auf "stereo/on" stellen, VR901 so einstellen, daß der Ausgang unter Bewirken der Dämpfung gegeben wird.
	UKW-STEREO-DEKODER-ABGLEICH					
	Unter Verwendung eines Zählers			Alternativ-Meßmethode		
12	1. Unmoduliertes Mono-Signal 100.10MHz in das Gerät speisen. 2. Betriebsarten-/Stummabstimmschalter auf "stereo/on" stellen. 3. Zähler über einen Widerstand 100kΩ an **TP301** schließen. 4. **VR302** auf 19kHz ±30Hz einstellen.			1. Stereosignal entweder von einem Stereogenerator oder einem Sender einspeisen. 2. **VR302** so einstellen, bis die Stereolamper auf leuchtet. Schleifer von **VR302** sichern, wie in Abb. 4 gezeigt.		
	KANALTRENNUNG-ABGLEICH					
13	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	100.10MHz Das Gerät auf 100MHz 1kHz 30%, Pilot 10% Modulation 60dB Stereosignal einstellen.	100.10MHz	Wechselstrom-Röhrenvoltmeter oder Oszillograph durch Tiefpaß filter (fc=15 ~ 10kHz) an Ausgangsanschlüsse des Gerötes anschließen (Vgl Abb. 5)	VR301 (Kanaltrennung-Abgleich)	1. Betriebsarten-/Stummschalter auf "stereo/on" stellen und abstimmen. 2. VR301 auf minimale Anzeige des R-Ausgangs bei Stereo-modulator in L-(L-Kanalmodulation) Modus, und auf minimale Anzeige des L-Ausgangs in R-Modus abgleichen.

INSTRUCTIONS D'ALIGNMENT FRANCAIS

Notes:

1. Sélecteur de gamme· · · · · · · · · · · · · · · {AM (Alignement AM) / FM (Alignement FM)}
2. Commutateur de mode/réglage silencieux . . . . mono/off.
3. Sélecteur de mode-programmation . . . . manual.
4. Sélecteur d'antenne . . . . NORMAL
5. Conservel la tension du secteur à la tension nominale.
6. Antenne fictive FM 300Ω . . . . Voir fig. 5.
7. Le signal du générateur ne doit pas être plus élevé qu'il n'est nécessaire à obtenir une lecture en sortie.

	AM/FM GENERATEUR		AIGUILLE SUR LE FREQUENCE	INDICATEUR (VOLTMETRE ELECTRONIQUE OSCILLOSCOPE OU DISTORSIONMETRE)	POINTS DE REGLAGE	OBSERVATIONS
	BRANCHEMENT	FREQUENCE				
	ALIGNMENT AM					
1	Côté supérieur à la borne TP3. Commun an shâssls	450kHz (modulé à 30% par 400Hz)	Point sans signal	C.A. voltmètre électronique ou oscilloscope sur prise de "REC OUT" de l'appareil.	T201 (1 transfor FI) T202 (2 transfor FI)	Réglez au maximum de signal de sortie.
2	Faire une boucle de quelgues tours et rayonner le signal dans le cadre du l'ampli-tuner.	531kHz (modulé à 30% par 400Hz)	531kHz	Brancher le voltmétre électronique à C.C. aux bornes TP202.	L202 (bobine OSC)	Régler la L202 à 1.0 ± 0.05V.
3	Faire une boucle de quelgues tours et rayonner le signal dans le cadre du l'ampli-tuner.	612kHz (modulé à 30% par 400Hz)	612kHz	C.A. voltmètre électronique ou oscilloscope sur prise de "REC OUT" l'appareil.	L201 (bobine ANT)	Réglez au maximum de signal de sortie. Régler le noyau ferrite de L201 à l'aide d'un tournevis.
4	Faire und boucle de quelgues tours et rayonner le signal dans le cadre du l'ampli-tuner	1503kHz (modulé à 30% par 400Hz)	1503kHz	C.A. voltmètre électronique ou oscilloscope sur prise de "REC OUT" de l'appareil.	CT201 (trimmer ANT)	Réglez au maximum de signal de sortie. Recommencez les étapes (2) et (3).
	ALIGNEMENT FI-FM					
5		Sans signal	Point sans signal	Brancher le voltmètre électronique à C.C. aux bornes TP102 et TP103.	T101 (transfor F1 discri)	1. Commutateur de mode/réglage silencieux "stereo/on". 2. Régler le noyau T101 de telle sorte que le voltage mesuré dans le mode sans signal, soti de 0V dans la gamme des 300mV.

	ALIGNEMENT DE LA FREQUENCE DU QUARTZ					
6		Sans signal	87.50MHz	Brancher le VTVM CC aux bornes de l'antenne (bornes de 75 ohms)	L6 (Bobine oscillatrice)	1. Régler le commutateur du sélecteur de l'antenne sur la position "TUNED TYPE". 2. Régler la L6 (bobine oscillatrice) sur 3.0V.
7		Sans signal	87.50MHz	Brancher le fréquencemétre au collecteur de Q4. **Note:** Les fréquences de réglage sont différentes suivant la couleur des filtres céramiques utilisés (CF101 ~ CF103).	CT901 (Fréquence du quartz)	Régler CT901 sur 98.1751 MHz, 98.2001MHz ou 98.2251MHz. Couleur – Fréquence Bleu – 98.1751MHz Rouge – 98.2001MHz Orange – 98.2251MHz
	ALIGNEMENT RF-FM					
8	Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	90.10MHz (modulé à 100% par 400Hz)	90.10MHz	Oscilloscope sur prise de "REC OUT" du tuner.	L3 (1er détecteur) L4 (2e détecteur) L1 (bobine ANT) T1 (FM IFT)	1. Appliquer une entrée faible de telle sorte que le parasite soit compris dans la forme de l'onde de sortie. 2. Faire le réglage de telle sorte que la forme de l'onde de sortie soit verticalement symétrique. (Voif fig. 7) 3. Refaire les réglages (8) et (9) jusqu' à ce que la fréquence corresponde correctement avec l'échells du cadran.
9	Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	106.10MHz (modulé à 100% par 400Hz)	106.10MHz	Oscilloscope sur prise de "REC OUT" du tuner.	CT1 (trimmer OSC)	
	REGLAGE DE LA DISTORSION FM EN MONO					
10	Branchez suf la prise d'antenne FM à travers und antenne fictive FM.	100.10MHz (modulé à 100% par 400Hz, 60dB).	106.10MHz	Distorsionètre sur prise de "REC OUT" du tuner.	T102 (Transfor FI discri.)	1. Placer la commutateur Sourdine FM/Mode sur "stereo/on" et vérifier l'étape 4 dans un mode sans signal. 2. S'il est déplacé, re-régler A (côté primaire) de T101. 3. Régler le noyou T102 de telle sorte que la distorsion des canaux droit et gauche soit la plus faible.
11	Branchez suf la prise d'antenne FM à travers une antenne fictive FM. Niveau de sortie du générateur 16dB 6.3μV).	100.10MHz (modulé à 100% par 400Hz)	100.10MHz		VR901	1. Régler le commutateur de mode/réglage silenciexu FM sur la position "mono/off" et accorder sur 100.10MHz. 2. Avec le commutateur de mode/réglage silencieux FM réglé sur la position "stereo/on", régler le VR901 de telle sorte que la sortie fournie avec le réglage silencieux en position déclenchée.
	ALIGNEMENT DU PILOTE MULTIPLEX FM					
	Avec un fréquencemétre			Par un outre systéme		
12	1. Signal mono 100.10MHz non modulé appliqué à l'appariel. 2. Commutateur de silencieux sur "stereo/on". 3. Branchez le fréquencemètre sur **TP301** à travers une résistance de 100kΩ. 4. Régler **VR302** sur 19kHz ± 30Hz.			1. Appliquez à l'appareil un sinal stéréo provenant d'un générateur ou de la réception d'un émetteur. 2. Régler **VR302** jusqu à ce que l'indicateur de stéréophonic s'allume. Collez le curseur de **VR302** comme indiqué sur la fig. 8.		
	AM/FM GENERATEUR		ALGUILLE SUR LE FREQUENCE	INDICATEUR (VOLTMETRE ELECTRONIQUE OSCILLOSCOPE OU DISTORSIONMETRE)	POINTS DE REGLAGE	OBSERVATIONS
	BRANCHEMENT	FREQUENCE				
	REGLAGE DE LA SEPARATION DES CANAUX					
13	Branchez suf la prise d'antenne FM à traves une antenne fictive FM.	100.10MHz Ajouter 100MHz, 1kHz Modulation pilote 10%, signal stéréophonique 60dB, à làppareil.	100.10MHz	Brancher un voltmètre éléctronique C.A. ou un oscilloscope aux bornes de sortie, par l'intermédiaire du filtre passe-bas (fc= 15 ~19kHz). (Voir fig. 9)	VR301	1. Placer le commutateur de mono/réglage silencieux FM sur "stereo/on" et accorder sur 100.10MHz. 2. Régler VR301 de telle sorte que la sortie droite soit minimale quand la commande d'accord stérépphonique est dans le mode gauche (modulation du canal gauche) et que la sortie gauche soit minimale dan mode droit.

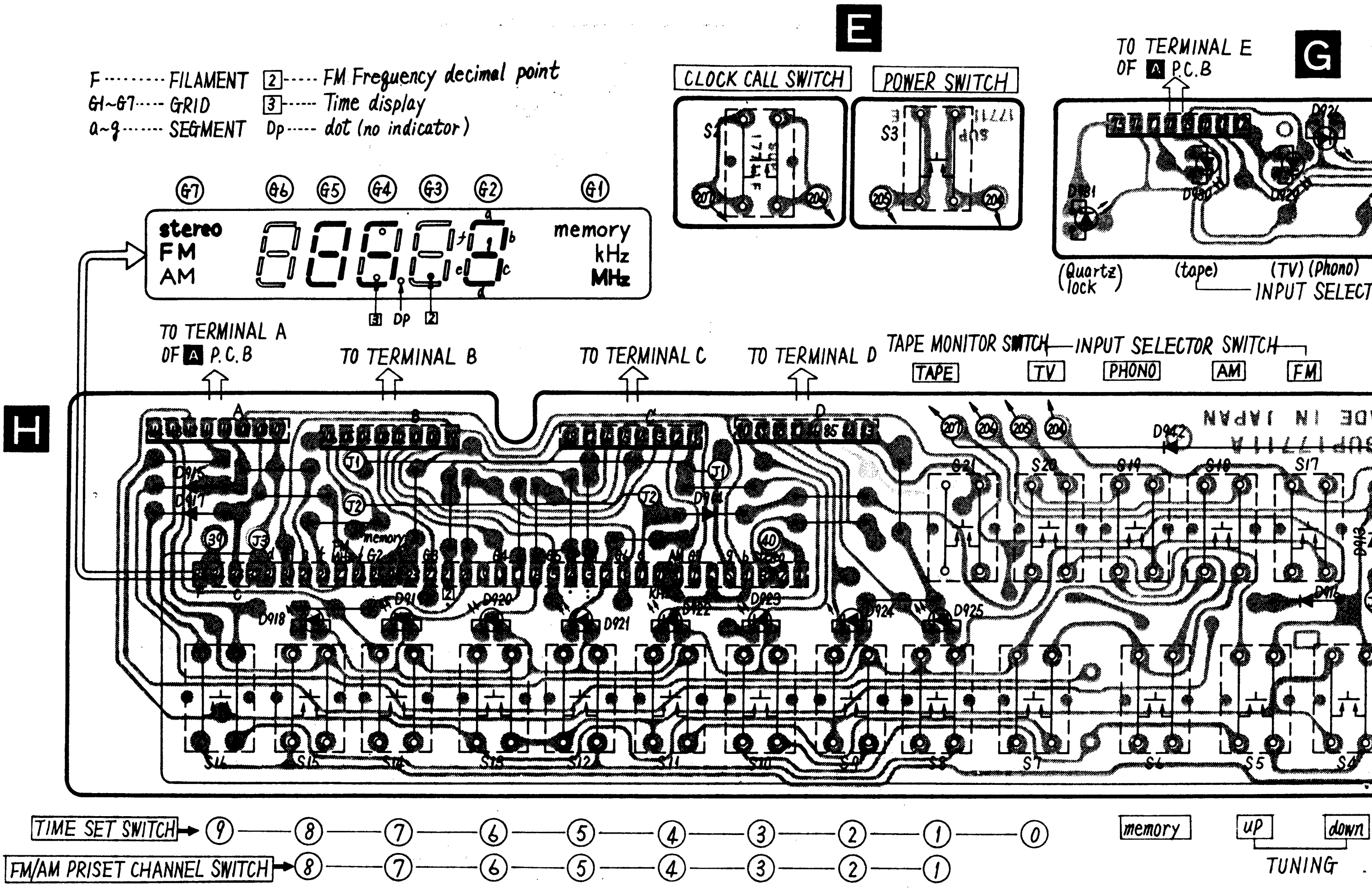
■ REPLACEMENT PARTS LIST (Electric Parts)

NOTES: 1. Part numbers are indicated on most mechanical parts Please use this part number for parts orders.
2. ⚠ indicates that only parts specified by the manufacturer be used for safety.

Ref. No.		Part No.	Part Name & Description
		INTEGRATED CIRCUITS	
IC1		SVIUPB553C-E	IC, Pre-Scaller
IC101		AN278	IC, FM IF Amplifier
IC102		AN7001SW	IC, AM Converter, FM IF Amplifier, FM Detector & Stereo Decoder (MPX)
IC401, 402		SVITA7129P	IC, Equalizer Amplifier
IC501		SVINJM4559DS	IC, Tone Amplifier
IC701		SVITA78L006A	IC, Voltage Regulator
IC901		SVIUPD1704CL	IC, PLL Synthesizer CPU
IC902		SVITC5067BP	IC, FL Driver
IC903		SVIM74LS42P	IC, BCD to Decimal
IC960		SVIM74LS00P	IC, Nand Gates
IC961		SVIM74LS76P	IC, J-K Flip-Flops
		TRANSISTORS	
Q1		2SK195-H2	Transistor, FM RF Amplifier
Q2		2SC1674-M	Transistor, FM Mixer
Q3 ~ 5		2SC1675-L1	Transistor, V.C.O. Buffer (Use in ranks L1 or L2)
Q6 ~ 8, 203 204		2SC945-P2	Transistor, Low Pass Filter (Use in ranks P1 or P2)
Q201, 202		**2SC829-C**	Transistor, AM Oscillator & Buffer
Q301 ~ 304		2SC1684-S	Transistor, AF Amplifier (Use in ranks S or T)
Q401 ~ 404, 707, 970, 972, 974, 975		2SC1815-Y	Transistor, Emitter Follower, Regulator, Switching & Relay Drive (Use in ranks Y or O)
Q405, 406, 906		2SC1685-T	Transistor, AM Muting & FM/AM Muting (Use in ranks S or T)
Q701, 704, 709 969, 971, 973		2SA1015-Y	Transistor, Relay Drive, Regulator & Switching (Use in ranks Y or O)
Q702		2SC2631-R	Transistor, Regulator (Use in ranks Q, R or S)
Q703		2SC1980-T	Transistor, Switching (Use in ranks Q, R or S)
Q705		2SA921-T	Transistor, Regulator (Use in ranks Q, R or S)
Q706		2SC1913-R	Transistor, Regulator (Use in ranks P,Q or R)
Q708		2SA684NC-R	Transistor, Regulator (Use in ranks P,Q or R)
Q790, 791		2SC1684-T	Transistor, Switching
Q901, 910, 914		**2SA666AI-R**	Transistor, Switching
Q902 ~ 904, 907 915, 916		**2SA666AI-R**	Transistor, FL Driver, Remote Inter Face & Switching
Q905, 908, 909 911 ~ 913, 917 ~ 919, 923, 976 [XA only]		**2SC1328-T**	Transistor, FM/AM Muting & Switching
Q960 ~ 966		**2SC1328-T**	Transistor, Switching
Q967, 968		2SA1015-Y	Transistor, Switching (Use in ranks Y or O)
		DIODES	
D1, 2, 3, 4		**MA320G1-N**	Diode, Variable Capacitor (FM)
D201		SVDBB113	Diode, Variable Capacitor (AM)
D202, 791, 912 945 ~ 947		**20A90**	Diode, AM Detector, Bias or OR Circuit
D203 ~ 206, 401 ~ 408, 718, 719 792, 901 ~ 906 908 ~ 911, 913 ~ 917, 932, 933 934 [XA] only 935 [DX. DM, XSW, XE] 936 ~ 943, 960 ~ 971		**MA162A**	Diode, AGC & Switching
D701, 708, 709 711, 712, 907	⚠	**SVDSR1K2**	Diode, Rectifier
D702, 714, 716		**MA27A2**	Diode, Rectifier
D705		SVDMZ327B	Diode, 27V Zener
D707		SVDMZ307B	Diode, 7V Zener
D710		**SVDMZ339B**	Diode, 39V Zener
D715		SVDMZ316C2	Diode, 16V Zener
D717		SVDMZ318B	Diode, 18V Zener
D790		SVDMZ303A	Diode, 3V Zener
D918 ~ 925		LN831RP	Diode, Light Emitting Diode
D926 ~ 929		LN26RP	Diode, Light Emitting Diode
D930		LN46YP	Diode, Light Emitting Diode
D931		LN224RP	Diode, Light Emitting Diode
D952		SVDMZ412C1	Diode, 12V Zener
		COILS and TRANSFORMERS	
L1		SLA4N17	Coil, FM Antenna
L2		RLQY25S5-O	Coil, Choke
L3		SLD4P35-P	Coil, FM RF Detector (1st)
L4		SLD4P37-P	Coil, FM RF Detector (2nd)
L5		ELQ5A77	Coil, Choke
L6		SLO4P67-P	Coil, FM Local Oscillator
L7, 8		SLQAN40G-1	Coil, Choke
L101		SLQX180-2	Coil, Choke
L102, 203, 204		SLQX101-3M	Coil, Choke
L201		SLF2D57	Coil, AM Ferrite Core Antenna
L202		SLO2C13-P	Coil, AM Local Oscillator
L301		SLQX393-1Z	Coil, Choke
T1		SLI4C109	Transformer, FM IF
T101		SLI4C515-1	Transformer, FM IF
T102		SLI4C517-1	Transformer, Discriminator
T201		SLI2C127	Transformer, AM IF
T202		SLI2C413	Transformer, AM IF
T701	⚠	SLT5L157-W	Transformer, Power Source
		VARIABLE RESISTORS	
VR301		**EVTS0AA00B24**	Separation Adjustment, 20kΩ (B)
VR302		**EVTS3MA00B53**	PLL MPX VCO Adjustment, 5kΩ (B)
VR501		EWJFHA089BF5	Volume Control, 250kΩ (B)
VR502		EVHFKA505G25	Balance Control, 200kΩ (G)
VR503, 504		EWKGSA091C15	Bass & Treble Control, 100kΩ (C)
VR901		**EVTS3MA00B54**	FM Muting Level Adjustment, 50kΩ (B)
		COMPONENT COMBINATIONS	
Z1		EXRP103P102C	Component Combination, 1kΩ & 0.001μF
Z101		EXF3SL04C	Component Combination, 0.01μF (X3)
Z201		EXRF203Z471S	Component Combination, 470Ω & 0.01μF (X2)
Z401, 402		EXA6SD01C	Component Combination, Equalizer Circuit
Z701, 703		EXRFS203ZS	Component Combination, 0.01μF (X2)
Z901, 902		EXBP87104K	Component Combination, 100kΩ (X4)
		CERAMIC FILTERS	
CF101, 102, 103		SVFE107MM-A	Ceramic Filter, 10.7MHz (Red)
		SVFE107MM-B	Ceramic Filter, 10.675MHz (Blue)
		SVFE107MM-C	Ceramic Filter, 10.725MHz (Orange)
CF201		SVFSFP450HT	Ceramic Filter, AM 450kHz
		CRYSTAL	
X901		SVQ43U452	Crystal, 4.5MHz
		VARIABEL CAPACITORS	
CT1, 201		SVCTY121B269	Trimmer, Local Oscillator & AM Antenna
CT901		ECV1ZW06X32E	Trimmer, Crystal Oscillator
		RELAYS	
RLY401		SSY73	Relay, Tapemonitor
RLY701	⚠	SSY81	Relay, AC Output
		DISPLAY PANEL	
FL		SAD7MT09ZA	Display Panel, Indication
		SWITCHES	
S1		ERD14116	Switch, Antenna Selector
S2 ~ 21		SSG1	Switch, Manual Scan, Memory Write & Channel Preset
S22		SSR93	Switch, Program mode
S23 ~ 25		SSH427	Switch, Mode/muting, Loudness, Hight-cut filter & Subsonic Filter
S28		ESE372	Switch, Voltage Adjuster
S29 [XA] except	⚠	ESB70133	Switch, Power
S30 [XA] only		ESD14116	Switch, Frequency Allocation
		FUSE	
F1	⚠	XBA2C06TR0	Fuse, T630mA (250V)
F2, 3	⚠	XBA2C05TR0	Fuse, T500mA (250V)

Areas
- * (DX) is available in Scandinavia except Denmark and European.
- * (DG) is available in Scandinavia and European except Switzerland.
- * (DM) is available in Denmark.
- * (EB) is available in Belgium.
- * (XE) is available in United Kingdom.
- * (XSW) is available in Switzerland.
- * (XGH) is available in Holland.
- * (XGF) is available in France.
- * (XA) is available in Asia, Latin America, Middle East and Africa.

■ PRINTED CIRCUIT BOARD WIRING VIEW


E
G
H
F ········ FILAMENT
G1~G7 ···· GRID
a~g ······ SEGMENT
2 ····· FM Frequency decimal point
3 ····· Time display
Dp ···· dot (no indicator)
G7 G6 G5 G4 G3 G2 G1
stereo
FM
AM
memory
kHz
MHz
a b c d e f g
3 DP 2
CLOCK CALL SWITCH
POWER SWITCH
S2
S3
TO TERMINAL E
OF A P.C.B
(Quartz lock)
(tape)
(TV) (Phono)
INPUT SELECT
TO TERMINAL A
OF A P.C.B
TO TERMINAL B
TO TERMINAL C
TO TERMINAL D
TAPE MONITOR SWITCH
INPUT SELECTOR SWITCH
TAPE
TV
PHONO
AM
FM
MADE IN JAPAN
SUP1771A
D915
D917
D918
D919
D920
D921
D922
D923
D924
D925
D942
D916
S14 S15 S16 S13 S12 S11 S10 S9 S8 S7 S6 S5 S4
S17 S18 S19 S20 S21
TIME SET SWITCH → 9 — 8 — 7 — 6 — 5 — 4 — 3 — 2 — 1 — 0
FM/AM PRISET CHANNEL SWITCH → 8 — 7 — 6 — 5 — 4 — 3 — 2 — 1
memory
up
down
TUNING

select	Q963 B	Q963 C	Q963 E	Q962 B	Q962 C	Q962 E	Q960 B	Q960 C	Q960 E	Q961 B	Q961 C	Q961 E
FM	1.4	0.9	0.7	1.4	1.4	0.7	1.4	0.8	0.7	0.6	1.4	0.8
AM	0.8	1.4	0.7	1.4	0.8	0.7	1.4	0.8	0.7	1.6	1.0	0.8
phono	0.7	1.4	0.7	0.6	0.7	0.7	0.6	2.5	0.7	2.9	2.5	2.5
TV	0.7	1.4	0.7	0.6	0.7	0.7	0.6	2.5	0.7	2.9	2.5	2.5
tape												
power all off		12.0									12.0	

select	Q966 B	Q966 C	Q966 E	Q967 B	Q967 C	Q967 E	Q968 B	Q968 C	Q968 E
FM	0.6	11.0	0.7	3.8	4.2	-30	5.5	0	5.5
AM	0.6	11.0	0.7	3.8	4.2	-30	4.4	5.0	5.0
phono	0.6	11.0	0.7	3.8	4.2	-30	5.5	0	5.5
TV	0.6	11.0	0.7						
tape		1.0		3.1	3.8	3.7	5.5	0	5.5
power all off		12.0							

Q960 ~ 966
2SC828
SWITCHING

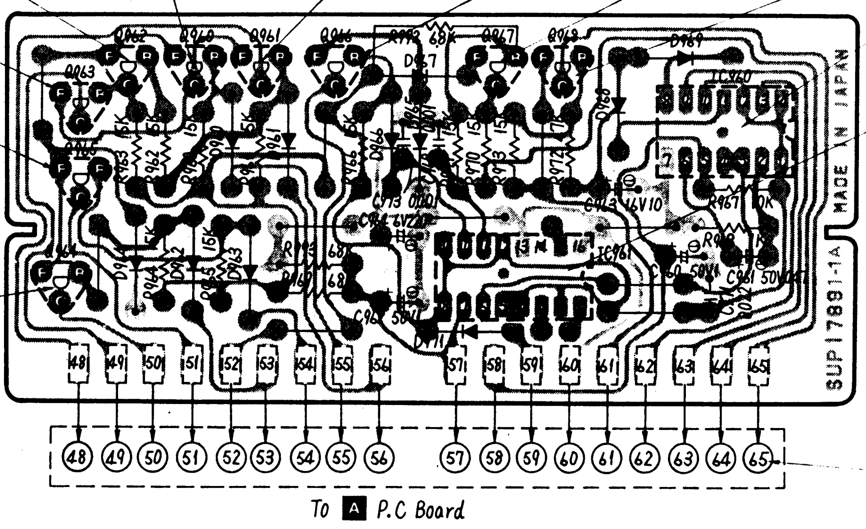
Q967, 968
2SA1015
SWITCHING

Q965

	B	C	E
FM	0.6	1.6	0.7
AM	0.6	1.6	0.7
phono	0.6	1.6	0.7
TV	1.4	0.8	0.7
tape			
power all off		12.0	

Q964

	B	C	E
FM	0.6	2.0	0.7
AM	0.6	2.0	0.7
phono	1.4	0.8	0.7
TV	0.6	2.0	0.7
tape			
power all off		12.0	


F
Q962 Q960 Q961 Q966 Q967 Q968
Q963
Q965
Q964
R992 6.8K
D967
D969
IC960
IC961
D960
D961
D962
D963
D964
D965
D966
D971
R967 10K
C961 50V1
C962
C963
C964
15K
5.6K
68
48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65
MADE IN JAPAN
SUP17891-1A
To A P.C Board

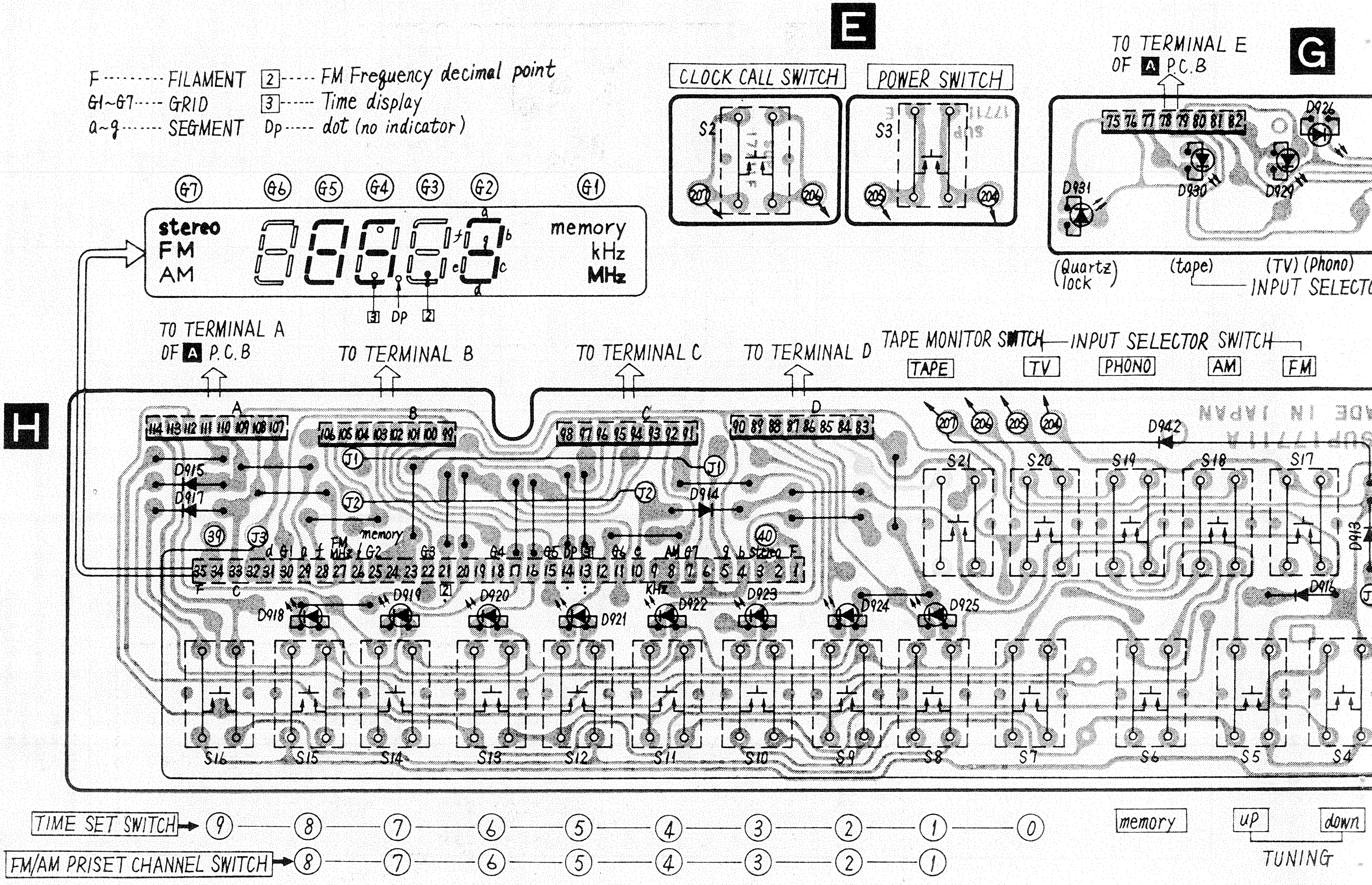
IC960
SVIM74LS00P
NAND GATES

IC961
SVIM74LS76P
FLIP-FLOPS

No	phono	FM	AM	TV	power all off
53	3.6	0.1	0.1	0.1	0
54	0	0	0	4.4	0
55	0	3.6	3.6	0	0
56	4.4	0	4.4	4.4	0
57	2.2	2.2	2.2	2.2	2.2
58	4.4	4.4	4.4	4.4	4.4
59	5.1	5.1	5.1	5.1	5.1
60	0	0	0	0	0
61	5.1	5.1	5.1	5.1	5.1
62	5.6	5.1	5.1	5.6	0
63	0	4.3	4.3	0	4.4
64	-29	-29	-29	-29	-33
65	0	0	5.1	0	5.1

▨ **Earth (Ground) Lines**

■ PRINTED CIRCUIT BOARD WIRING VIEW


F·········FILAMENT
G1~G7·····GRID
a~g·········SEGMENT
2·····FM Frequency decimal point
3·····Time display
Dp·····dot (no indicator)
G7 G6 G5 G4 G3 G2 G1
stereo
FM
AM
memory
kHz
MHz
3 DP 2
E
CLOCK CALL SWITCH
POWER SWITCH
S2
S3
TO TERMINAL E OF A P.C.B
G
D926 D931 D930 D929
(Quartz lock)
(tape)
(TV) (Phono)
INPUT SELECTOR
TO TERMINAL A OF A P.C.B
TO TERMINAL B
TO TERMINAL C
TO TERMINAL D
TAPE MONITOR SWITCH
INPUT SELECTOR SWITCH
TAPE
TV
PHONO
AM
FM
H
D915 D917 D914 D942 D913 D916
D918 D919 D920 D921 D922 D923 D924 D925
S21 S20 S19 S18 S17
S16 S15 S14 S13 S12 S11 S10 S9 S8 S7 S6 S5 S4
TIME SET SWITCH 9 8 7 6 5 4 3 2 1 0
FM/AM PRISET CHANNEL SWITCH 8 7 6 5 4 3 2 1
memory
up
down
TUNING

	Q963			Q962			Q960			Q961			Q966			Q967			Q968		
select	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
FM	1.4	0.9	0.7	1.4	1.4	0.7	1.4	0.8	0.7	0.6	1.4	0.8	0.6	11.0	0.7	3.8	4.2	-30	5.5	0	5.5
AM	0.8	1.4	0.7	1.4	0.8	0.7	1.4	0.8	0.7	1.6	1.0	0.8	0.6	11.0	0.7	3.8	4.2	-30	4.4	5.0	5.0
phono	0.7	1.4	0.7	0.6	0.7	0.7	0.6	2.5	0.7	2.9	2.5	2.5	0.6	11.0	0.7	3.8	4.2	-30	5.5	0	5.5
TV	0.7	1.4	0.7	0.6	0.7	0.7	0.6	2.5	0.7	2.9	2.5	2.5	0.6	11.0	0.7						
tape														1.0		3.1	3.8	3.7	5.5	0	5.5
power all off		12.0									12.0			12.0							

Q960～966
2SC828
SWITCHING

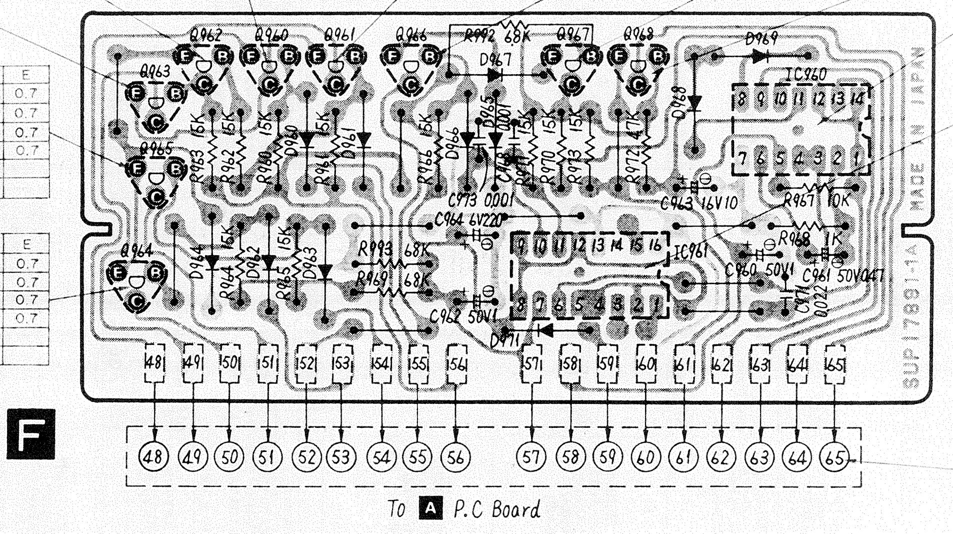
Q967, 968
2SA1015
SWITCHING

Q965

	B	C	E
FM	0.6	1.6	0.7
AM	0.6	1.6	0.7
phono	0.6	1.6	0.7
TV	1.4	0.8	0.7
tape			
power all off		12.0	

Q964

	B	C	E
FM	0.6	2.0	0.7
AM	0.6	2.0	0.7
phono	1.4	0.8	0.7
TV	0.6	2.0	0.7
tape			
power all off		12.0	

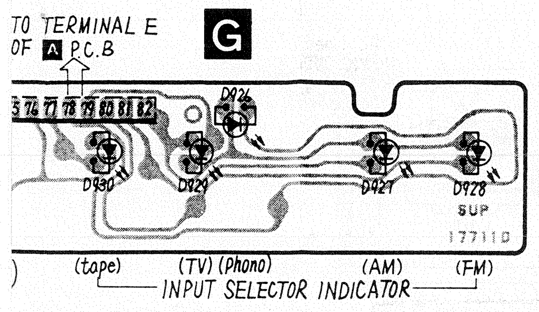

Q962 Q960 Q961 Q966 Q967 Q968 Q963 Q965 Q964
R992 68K
D967
D969
D968
IC960
8 9 10 11 12 13 14
7 6 5 4 3 2 1
R963 R962 R960 D960 R961 D961 R966 D966 D965 C965 R970 R973 R972 4.7K
15K
C973 0.001
C964 6V220
C963 16V10
R967 10K
R968 1K
IC961
9 10 11 12 13 14 15 16
8 7 6 5 4 3 2 1
C960 50V1
C961 50V0.47
C971 0.022
C962 50V1
D971
D964 R964 D962 R965 D963
R993 68K
R969 68K
MADE IN JAPAN
SUP17891-1A
48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65
F
To A P.C Board

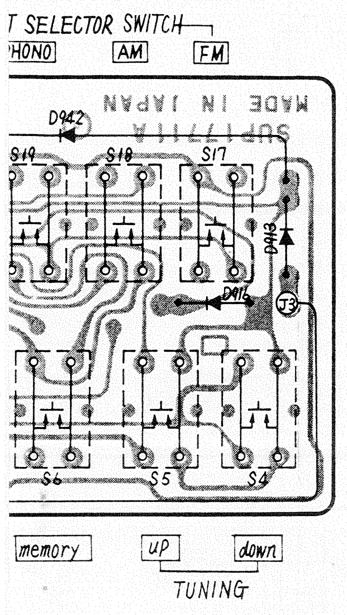
IC960
SVIM74LS00P
NAND GATES

IC961
SVIM74LS76P
FLIP-FLOPS

No	phono	FM	AM	TV	power all off
53	3.6	0.1	0.1	0.1	0
54	0	0	0	4.4	0
55	0	3.6	3.6	0	0
56	4.4	0	4.4	4.4	0
57	2.2	2.2	2.2	2.2	2.2
58	4.4	4.4	4.4	4.4	4.4
59	5.1	5.1	5.1	5.1	5.1
60	0	0	0	0	0
61	5.1	5.1	5.1	5.1	5.1
62	5.6	5.1	5.1	5.6	0
63	0	4.3	4.3	0	4.4
64	-29	-29	-29	-29	-33
65	0	0	5.1	0	5.1

▨ **Earth (Ground) Lines**


TO TERMINAL E
OF A P.C.B
G
D926
D930
D929
D927
D928
SUP
17711D
(tape)
(TV) (Phono)
(AM)
(FM)
INPUT SELECTOR INDICATOR


T SELECTOR SWITCH
PHONO
AM
FM
MADE IN JAPAN
SUP17711A
D942
S19
S18
S17
D913
D915
S6
S5
S4
memory
up
down
TUNING

966
328
HING

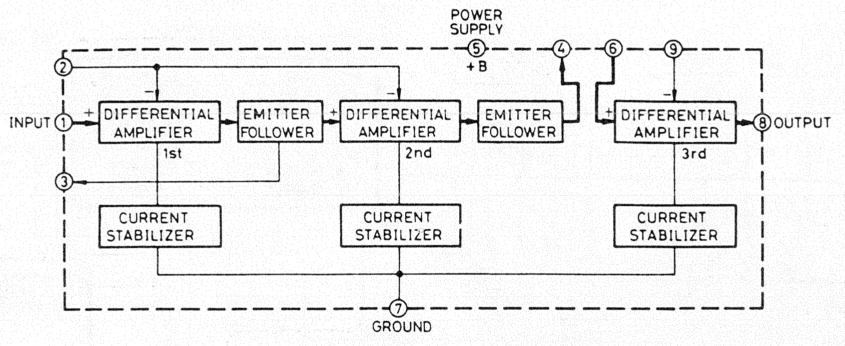
968
015
HING

IC960
74LS00P
ND GATES

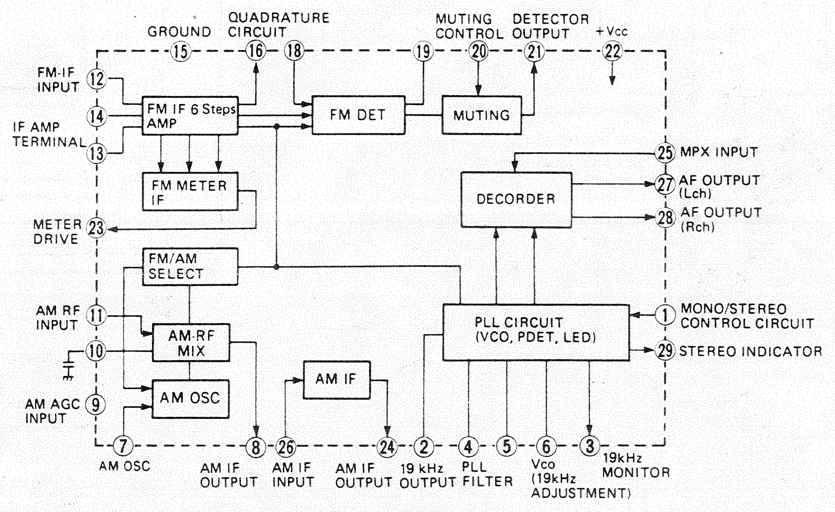
IC961
74LS76P
IP-FLOPS

hono	FM	AM	TV	power all off
3.6	0.1	0.1	0.1	0
0	0	0	4.4	0
0	3.6	3.6	0	0
4.4	0	4.4	4.4	0
2.2	2.2	2.2	2.2	2.2
4.4	4.4	4.4	4.4	4.4
5.1	5.1	5.1	5.1	5.1
0	0	0	0	0
5.1	5.1	5.1	5.1	5.1
5.6	5.1	5.1	5.6	0
0	4.3	4.3	0	4.4
-29	-29	-29	-29	-33
0	0	5.1	0	5.1

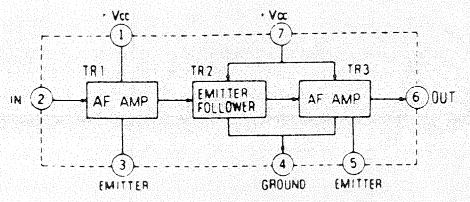
■ BLOCK DIAGRAM OF IC'S


POWER SUPPLY
+B
INPUT
DIFFERENTIAL AMPLIFIER
1st
EMITTER FOLLOWER
DIFFERENTIAL AMPLIFIER
2nd
EMITTER FOLLOWER
DIFFERENTIAL AMPLIFIER
3rd
OUTPUT
CURRENT STABILIZER
CURRENT STABILIZER
CURRENT STABILIZER
GROUND

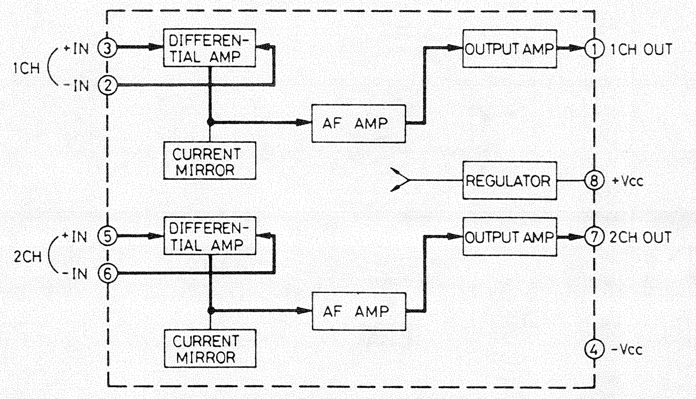
IC101 (AN278) FM IF Amplifier


GROUND
QUADRATURE CIRCUIT
MUTING CONTROL
DETECTOR OUTPUT
+Vcc
FM-IF INPUT
IF AMP TERMINAL
FM IF 6 Steps AMP
FM DET
MUTING
FM METER IF
MPX INPUT
DECORDER
AF OUTPUT (Lch)
AF OUTPUT (Rch)
METER DRIVE
FM/AM SELECT
AM RF INPUT
AM RF MIX
AM OSC
AM IF
PLL CIRCUIT (VCO, PDET, LED)
MONO/STEREO CONTROL CIRCUIT
STEREO INDICATOR
AM AGC INPUT
AM OSC
AM IF OUTPUT
AM IF INPUT
AM IF OUTPUT
19 kHz OUTPUT
PLL FILTER
Vco (19kHz ADJUSTMENT)
19kHz MONITOR

IC102 (AN7001ST) AM Converter, FM IF Amplifier, FM Detector & Stereo Decoder (MPX)

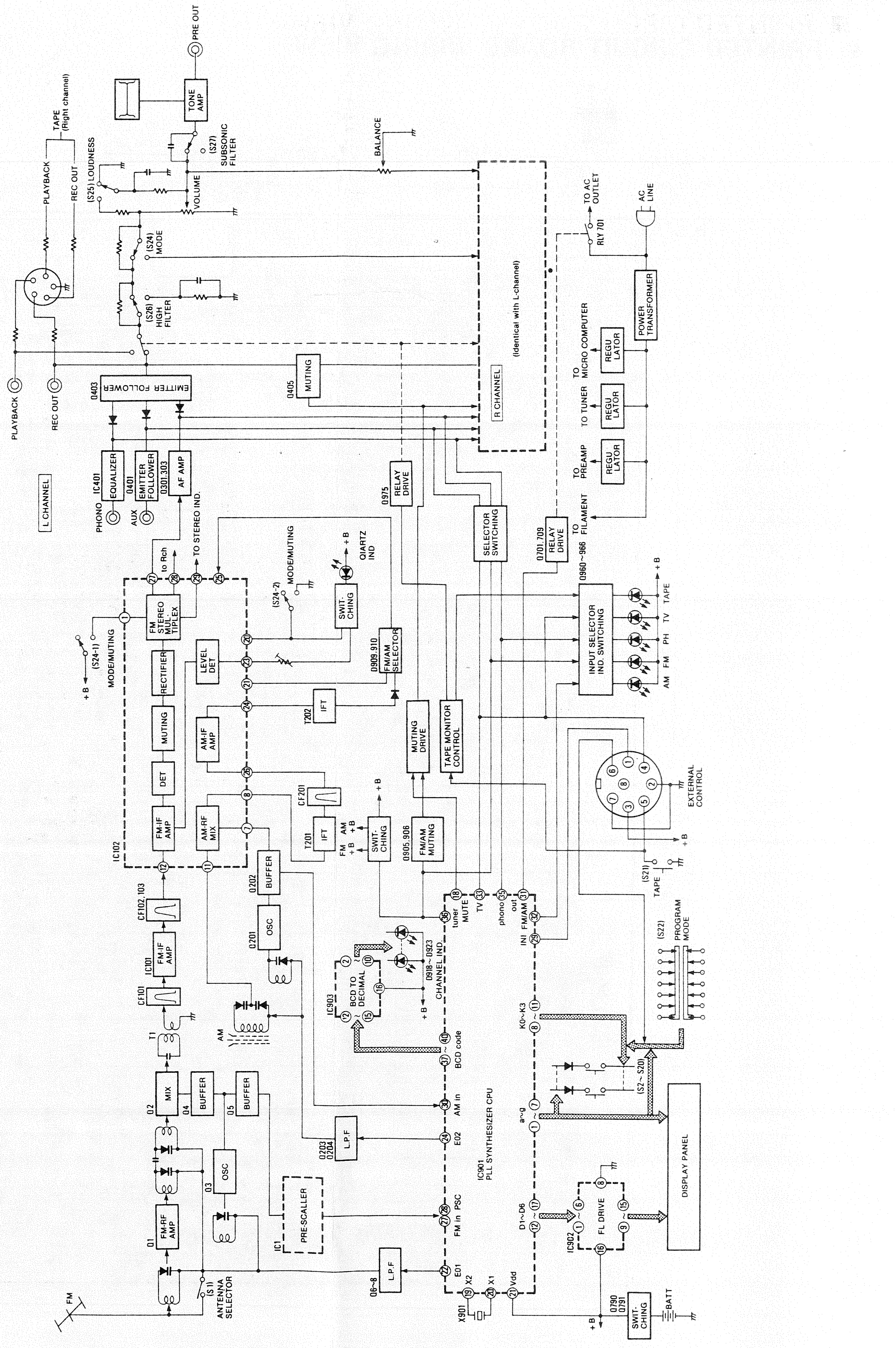

·Vcc
·Vcc
TR1
TR2
TR3
IN
AF AMP
EMITTER FOLLOWER
AF AMP
OUT
EMITTER
GROUND
EMITTER

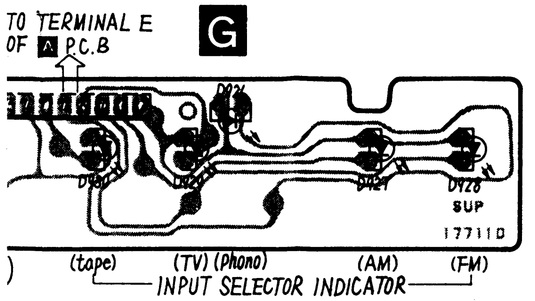
IC401, 402 (SVITA7129P) Equalizer Amplifier

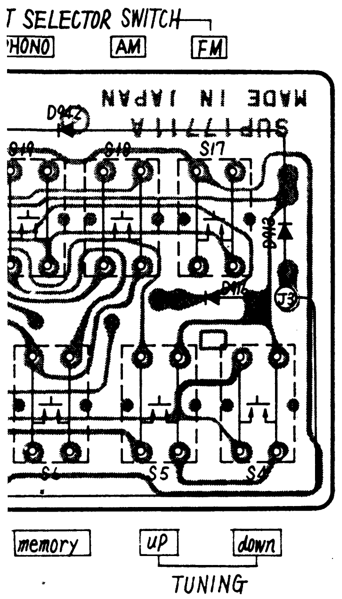

1CH
+IN
-IN
DIFFEREN-TIAL AMP
CURRENT MIRROR
AF AMP
OUTPUT AMP
1CH OUT
REGULATOR
+Vcc
2CH
+IN
-IN
DIFFEREN-TIAL AMP
CURRENT MIRROR
AF AMP
OUTPUT AMP
2CH OUT
-Vcc

IC501 (SVINJM4559DS) Tone Amplifier

■ BLOCK DIAGRAM


PRE OUT
TONE AMP
(S27) SUBSONIC FILTER
BALANCE
VOLUME
TAPE (Right channel)
PLAYBACK
REC OUT
(S25) LOUDNESS
(S24) MODE
(S26) HIGH FILTER
PLAYBACK
REC OUT
Q403 EMITTER FOLLOWER
L CHANNEL
PHONO
AUX
IC401 EQUALIZER
Q401 EMITTER FOLLOWER
Q301,303 AF AMP
Q405 MUTING
R CHANNEL
(Identical with L-channel)
TO AC OUTLET
RLY 701
AC LINE
POWER TRANSFORMER
TO MICRO COMPUTER
REGU LATOR
TO TUNER
REGU LATOR
TO PREAMP
REGU LATOR
TO FILAMENT
Q701,709 RELAY DRIVE
Q975 RELAY DRIVE
SELECTOR SWITCHING
Q960~966
INPUT SELECTOR IND. SWITCHING
TAPE
TV
PH
FM
AM
to Rch
TO STEREO IND.
MODE/MUTING
QIARTZ IND
(S24-2)
(S24-1) MODE/MUTING
SWIT-CHING
FM STEREO MUL TIPLEX
RECTIFIER
LEVEL DET
Q909,910 FM/AM SELECTOR
MUTING
AM-IF AMP
T202 IFT
MUTING DRIVE
TAPE MONITOR CONTROL
EXTERNAL CONTROL
DET
FM-IF AMP
AM-RF MIX
CF201
IFT
T201
FM AM
SWIT-CHING
Q905,906 FM/AM MUTING
IC102
CF102,103
Q202 BUFFER
Q201 OSC
(S21) TAPE
(S22) PROGRAM MODE
IC101 FM-IF AMP
CF101
T1
AM
IC903 BCD TO DECIMAL
D918~D923 CHANNEL IND.
tuner MUTE
TV
phono out
INI FM/AM
K0~K3
BCD code
AM in
E02
IC901 PLL SYNTHESIZER CPU
(S2~S20)
DISPLAY PANEL
Q2 MIX
Q4 BUFFER
Q5 BUFFER
Q203,Q204 L.P.F
Q3 OSC
PRE-SCALLER
IC1
FM in PSC
D1~D6
IC902 FL DRIVE
Q1 FM-RF AMP
(S1) ANTENNA SELECTOR
Q6~8 L.P.F
E01
X901 X2 X1
Vdd
Q790,Q791 SWIT-CHING
BATT
FM


TO TERMINAL E OF A P.C.B
G
D920
D921
D922
D927
D928
SUP
17711D
(tape)
(TV) (Phono)
(AM)
(FM)
INPUT SELECTOR INDICATOR


T SELECTOR SWITCH
PHONO
AM
FM
MADE IN JAPAN
SUP17711A
D942
S16
S10
S15
D943
D915
J3
S6
S5
S4
memory
up
down
TUNING

966
328
HING

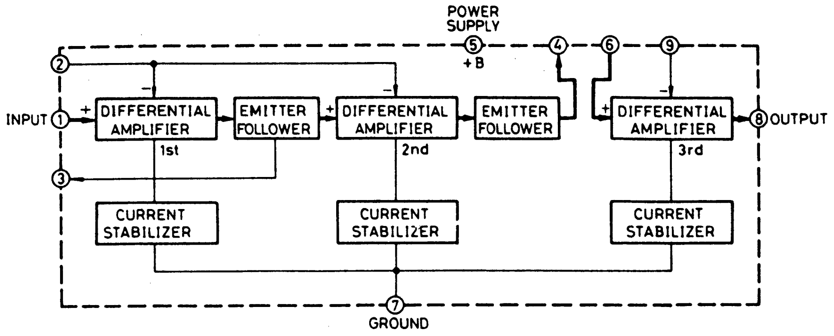
968
015
HING

IC960
174LS00P
ND GATES

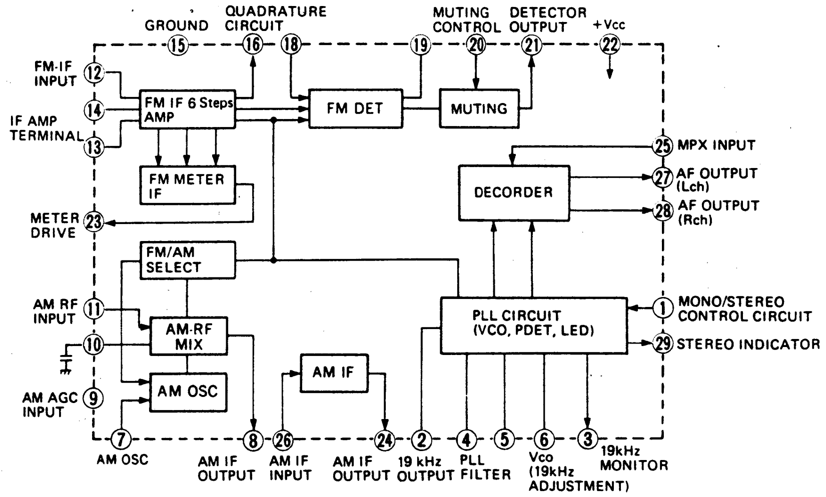
IC96
174LS76P
P-FLOPS

nono	FM	AM	TV	power all off
3.6	0.1	0.1	0.1	0
0	0	0	4.4	0
0	3.6	3.6	0	0
4.4	0	4.4	4.4	0
2.2	2.2	2.2	2.2	2.2
4.4	4.4	4.4	4.4	4.4
5.1	5.1	5.1	5.1	5.1
0	0	0	0	0
5.1	5.1	5.1	5.1	5.1
5.6	5.1	5.1	5.6	0
0	4.3	4.3	0	4.4
-29	-29	-29	-29	-33
0	0	5.1	0	5.1

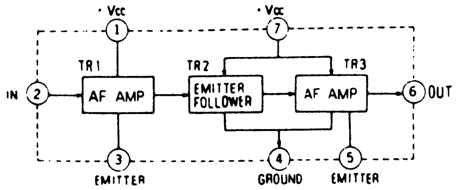
■ BLOCK DIAGRAM OF IC'S


POWER SUPPLY
+B
INPUT
OUTPUT
DIFFERENTIAL AMPLIFIER 1st
EMITTER FOLLOWER
DIFFERENTIAL AMPLIFIER 2nd
EMITTER FOLLOWER
DIFFERENTIAL AMPLIFIER 3rd
CURRENT STABILIZER
CURRENT STABILIZER
CURRENT STABILIZER
GROUND

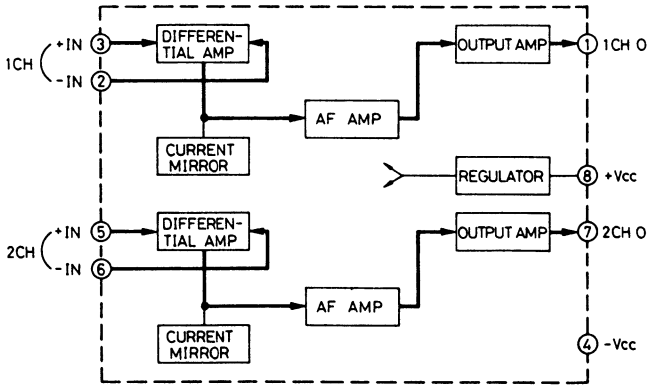
IC101 (AN278) FM IF Amplifier


GROUND
QUADRATURE CIRCUIT
MUTING CONTROL
DETECTOR OUTPUT
+Vcc
FM-IF INPUT
IF AMP TERMINAL
FM IF 6 Steps AMP
FM DET
MUTING
FM METER IF
MPX INPUT
DECORDER
AF OUTPUT (Lch)
AF OUTPUT (Rch)
METER DRIVE
FM/AM SELECT
AM RF INPUT
AM-RF MIX
PLL CIRCUIT (VCO, PDET, LED)
MONO/STEREO CONTROL CIRCUIT
STEREO INDICATOR
AM IF
AM OSC
AM AGC INPUT
AM OSC
AM IF OUTPUT
AM IF INPUT
AM IF OUTPUT
19 kHz OUTPUT
PLL FILTER
Vco (19kHz ADJUSTMENT)
19kHz MONITOR

IC102 (AN7001ST) AM Converter, FM IF Amplifier, FM Detector & Stereo Decoder (MPX)

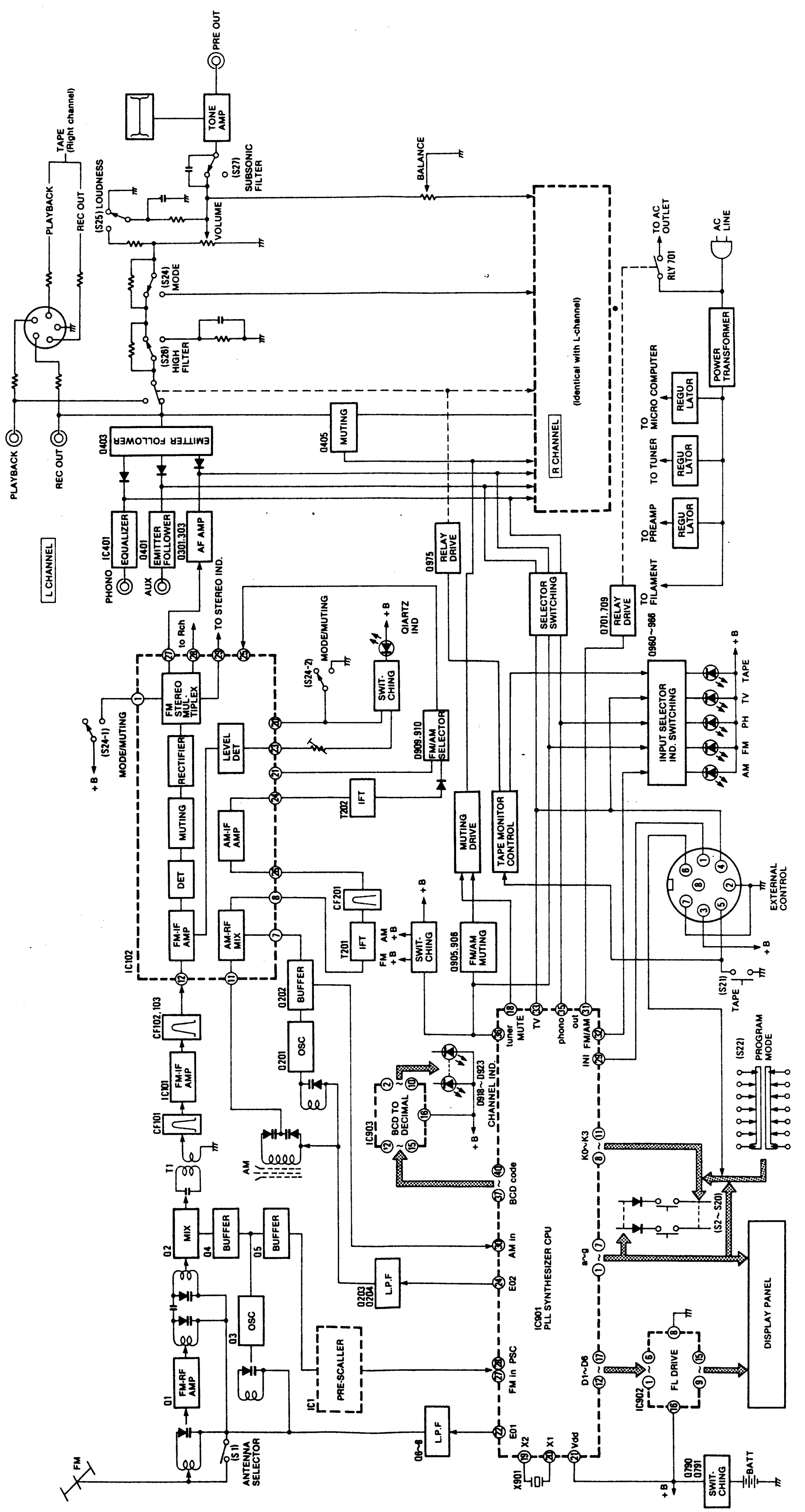

Vcc
Vcc
TR1
TR2
TR3
IN
AF AMP
EMITTER FOLLOWER
AF AMP
OUT
EMITTER
GROUND
EMITTER

IC401, 402 (SVITA7129P) Equalizer Amplifier


1CH
+IN
-IN
DIFFEREN-TIAL AMP
CURRENT MIRROR
AF AMP
OUTPUT AMP
1CH OUT
REGULATOR
+Vcc
2CH
+IN
-IN
DIFFEREN-TIAL AMP
CURRENT MIRROR
AF AMP
OUTPUT AMP
2CH OUT
-Vcc

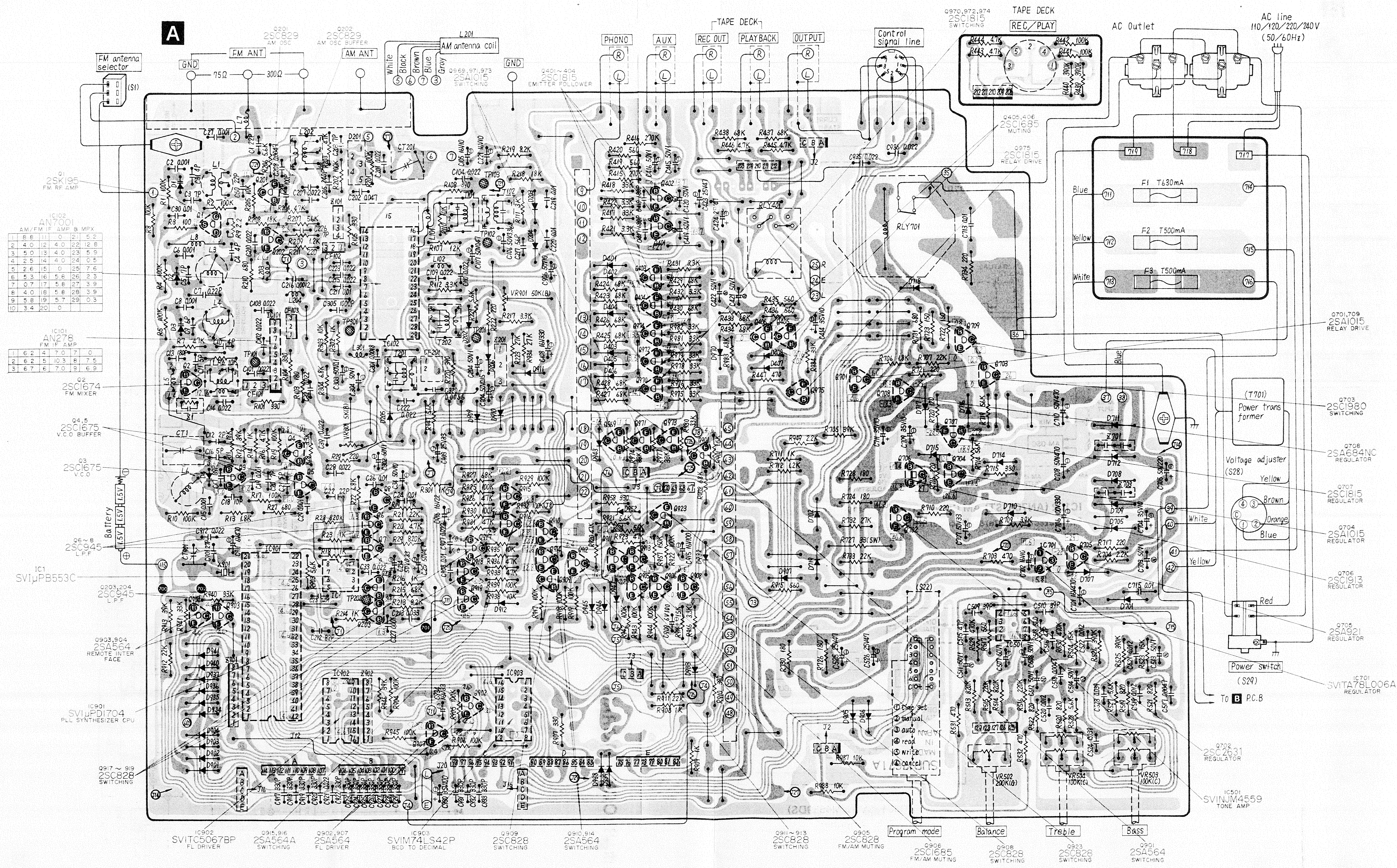
IC501 (SVINJM4559DS) Tone Amplifier

■ BLOCK DIAGRAM


PRE OUT
TONE AMP
(S27) SUBSONIC FILTER
BALANCE
TAPE (Right channel)
PLAYBACK
REC OUT
(S25) LOUDNESS
VOLUME
(S24) MODE
(S26) HIGH FILTER
PLAYBACK
REC OUT
Q403 EMITTER FOLLOWER
Q405 MUTING
(Identical with L-channel)
R CHANNEL
TO AC OUTLET
RLY 701
AC LINE
POWER TRANSFORMER
TO MICRO COMPUTER
REGU LATOR
TO TUNER
REGU LATOR
TO PREAMP
REGU LATOR
TO FILAMENT
RELAY DRIVE
Q701,709
L CHANNEL
PHONO
IC401 EQUALIZER
AUX
Q401 EMITTER FOLLOWER
Q301,303 AF AMP
TO STEREO IND.
Q975 RELAY DRIVE
SELECTOR SWITCHING
Q960~966
INPUT SELECTOR IND. SWITCHING
TAPE TV PH AM FM
to Rch
MODE/MUTING
QUARTZ IND
(S24-2)
SWIT-CHING
(S24-1) MODE/MUTING
FM STEREO MULTIPLEX
RECTIFIER
LEVEL DET
MUTING
DET
FM-IF AMP
AM-IF AMP
AM-RF MIX
Q909,910 FM/AM SELECTOR
IFT
T202
MUTING DRIVE
TAPE MONITOR CONTROL
EXTERNAL CONTROL
CF201
IFT
T201
FM AM
SWIT-CHING
Q905,908
FM/AM MUTING
IC102
(S21) TAPE
BUFFER
Q202
OSC
Q201
CF102,103
IC101 FM-IF AMP
CF101
T1
AM
tuner MUTE
TV
phono out
IN FM/AM
IC903 BCD TO DECIMAL
D918~D923 CHANNEL IND.
BCD code
(S22) PROGRAM MODE
K0~K3
Q2 MIX
Q4 BUFFER
Q5 BUFFER
AM in
E02
L.P.F
Q203 Q204
a~g
(S2~S20)
DISPLAY PANEL
IC901 PLL SYNTHESIZER CPU
Q3 OSC
IC1 PRE-SCALLER
FM in PSC
D1~D6
IC902 FL DRIVE
Q1 FM-RF AMP
FM
(S1) ANTENNA SELECTOR
Q6~8
L.P.F
E01
X2
X1
Vdd
X901
Q790 Q791
SWIT-CHING
BATT

■ PRINTED CIRCUIT BOARD WIRING VIEW

▨ Earth (Ground) Lines


A
FM antenna selector
(S1)
GND
FM ANT
75Ω
300Ω
AM ANT
Q201 2SC829 AM OSC
Q202 2SC829 AM OSC BUFFER
L201 AM antenna coil
White
Black
Brown
Blue
Gray
Q969,971,973 2SA1015 SWITCHING
GND
Q401~404 2SC1815 EMITTER FOLLOWER
PHONO
AUX
TAPE DECK
REC OUT
PLAY BACK
OUTPUT
Control signal line
Q970,972,974 2SC1815 SWITCHING
TAPE DECK
REC/PLAY
AC Outlet
AC line 110/120/220/240V (50/60Hz)
Q405,406 2SC1685 MUTING
Q975 2SC1815 RELAY DRIVE
RLY401
RLY701
F1 T630mA
F2 T500mA
F3 T500mA
Blue
Yellow
White
Q1 2SK195 FM RF AMP
Q2 2SC1674 FM MIXER
Q4,5 2SC1675 V.C.O BUFFER
Q3 2SC1675 V.C.O
Battery
1.5V
1.5V
1.5V
Q6~8 2SC945 L.P.F
IC1 SVIμPB553C
Q203,204 2SC945 L.P.F
Q903,904 2SA564 REMOTE INTER FACE
IC901 SVIμPD1704 PLL SYNTHESIZER CPU
Q917 ~ 919 2SC828 SWITCHING
IC902 SVITC5067BP FL DRIVER
Q915,916 2SA564A SWITCHING
Q902,907 2SA564 FL DRIVER
IC903 SVIM74LS42P BCD TO DECIMAL
Q909 2SC828 SWITCHING
Q910,914 2SA564 SWITCHING
Q911~913 2SC828 SWITCHING
Q905 2SC828 FM/AM MUTING
(S22)
① time set
② manual
③ auto
④ read
⑤ write
⑥ cancel
Program mode
Q906 2SC1685 FM/AM MUTING
VR502 200K(G)
Balance
Q908 2SC828 SWITCHING
VR504 100K(C)
Treble
Q923 2SC828 SWITCHING
VR503 100K(C)
Bass
Q901 2SA564 SWITCHING
IC501 SVINJM4559 TONE AMP
Q702 2SC2631 REGULATOR
Q701,709 2SA1015 RELAY DRIVE
(T701) Power trans former
Q703 2SC1980 SWITCHING
Q708 2SA684NC REGULATOR
Voltage adjuster (S28)
Yellow
Brown
Orange
Blue
White
Yellow
Q707 2SC1815 REGULATOR
Q704 2SA1015 REGULATOR
Q706 2SC1913 REGULATOR
Red
Q705 2SA921 REGULATOR
Power switch (S29)
IC701 SVITA78L006A REGULATOR
To B P.C.B

IC102
AN7001
AM/FM IF AMP & MPX

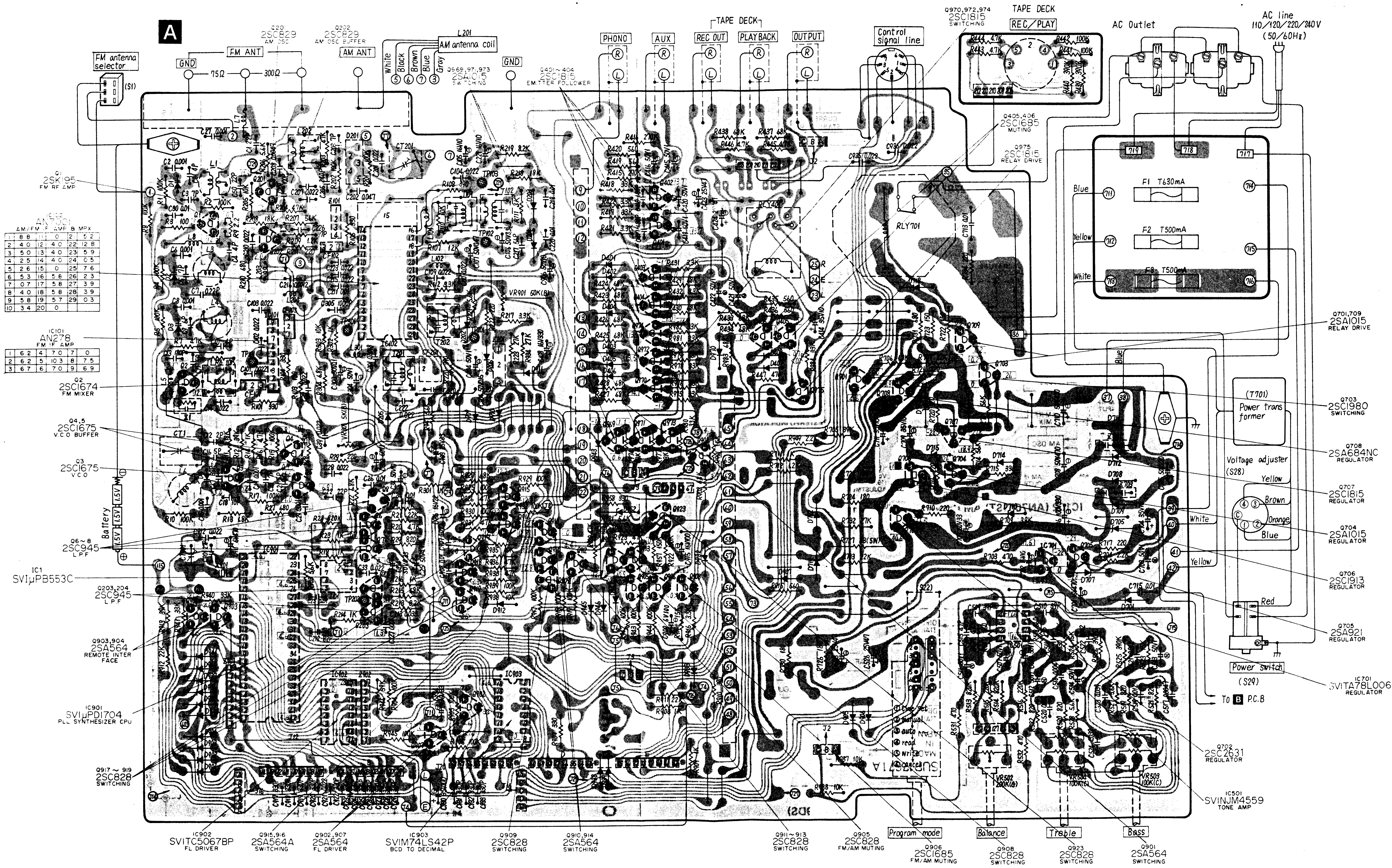
1	8.8	11	0	21	5.2
2	4.0	12	4.0	22	12.8
3	5.0	13	4.0	23	5.9
4	2.5	14	4.0	24	0.5
5	2.6	15	0	25	7.6
6	5.3	16	5.8	26	2.3
7	0.7	17	5.8	27	3.9
8	4.0	18	5.8	28	3.9
9	5.8	19	5.7	29	0.3
10	3.4	20	0		

IC101
AN278
FM IF AMP

1	6.2	4	7.0	7	0
2	6.2	5	10.3	8	7.5
3	6.7	6	7.0	9	6.9

■ PRINTED CIRCUIT BOARD WIRING VIEW

▨ Earth (Ground) Lines


A
FM antenna selector
(S1)
GND
FM ANT
75Ω
300Ω
Q201 2SC829 AM OSC
Q202 2SC829 AM OSC BUFFER
AM ANT
L201 AM antenna coil
White ⑤
Black ⑥
Brown ⑦
Blue ⑧
Gray
Q969,971,973 2SA1015 SWITCHING
GND
Q401~404 2SC1815 EMITTER FOLLOWER
PHONO
AUX
TAPE DECK
REC OUT
PLAYBACK
OUTPUT
R
L
Control signal line
Q970,972,974 2SC1815 SWITCHING
TAPE DECK
REC/PLAY
AC Outlet
AC line 110/120/220/240V (50/60Hz)
Q405,406 2SC1685 MUTING
Q975 2SC1815 RELAY DRIVE
RLY701
Blue
Yellow
White
F1 T630mA
F2 T500mA
F3 T500mA
711
712
713
714
715
716
717
718
719
Q1 2SK195 FM RF AMP
IC102 AN7001 AM/FM IF AMP & MPX
IC101 AN278 FM IF AMP
Q2 2SC1674 FM MIXER
Q4,5 2SC1675 V.C.O BUFFER
Q3 2SC1675 V.C.O
Battery
1.5V
1.5V
1.5V
Q6~8 2SC945 L.P.F
IC1 SVIμPB553C
Q203,204 2SC945 L.P.F
Q903,904 2SA564 REMOTE INTER FACE
IC901 SVIμPD1704 PLL SYNTHESIZER CPU
Q917 ~ 919 2SC828 SWITCHING
Q701,709 2SA1015 RELAY DRIVE
(T701) Power trans former
Q703 2SC1980 SWITCHING
Q708 2SA684NC REGULATOR
Voltage adjuster (S28)
Yellow
Brown
Orange
Blue
White
Yellow
Q707 2SC1815 REGULATOR
Q704 2SA1015 REGULATOR
Q706 2SC1913 REGULATOR
Red
Q705 2SA921 REGULATOR
Power switch (S29)
IC701 SVITA78L006A REGULATOR
To B P.C.B
Q702 2SC2631 REGULATOR
IC501 SVINJM4559 TONE AMP
VR502 200K(B)
VR504 100K(C)
VR503 100K(C)
Program mode
Balance
Treble
Bass
IC902 SVITC5067BP FL DRIVER
Q915,916 2SA564A SWITCHING
Q902,907 2SA564 FL DRIVER
IC903 SVIM74LS42P BCD TO DECIMAL
Q909 2SC828 SWITCHING
Q910,914 2SA564 SWITCHING
Q911~913 2SC828 SWITCHING
Q905 2SC828 FM/AM MUTING
Q906 2SC1685 FM/AM MUTING
Q908 2SC828 SWITCHING
Q923 2SC828 SWITCHING
Q901 2SA564 SWITCHING

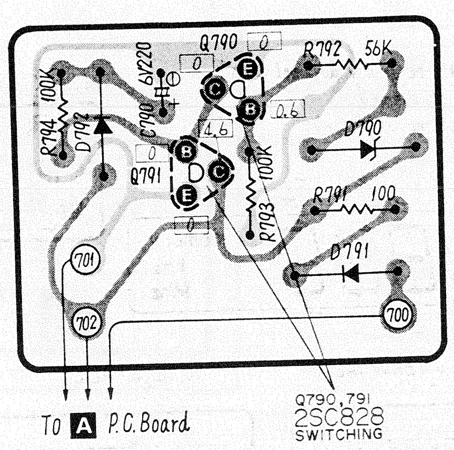
IC102
AN7001
AM/FM IF AMP & MPX

1	8.8	11	0	21	5.2
2	4.0	12	4.0	22	12.8
3	5.0	13	4.0	23	5.9
4	2.5	14	4.0	24	0.5
5	2.6	15	0	25	7.6
6	5.3	16	5.8	26	2.3
7	0.7	17	5.8	27	3.9
8	4.0	18	5.8	28	3.9
9	5.8	19	5.7	29	0.3
10	3.4	20	0		

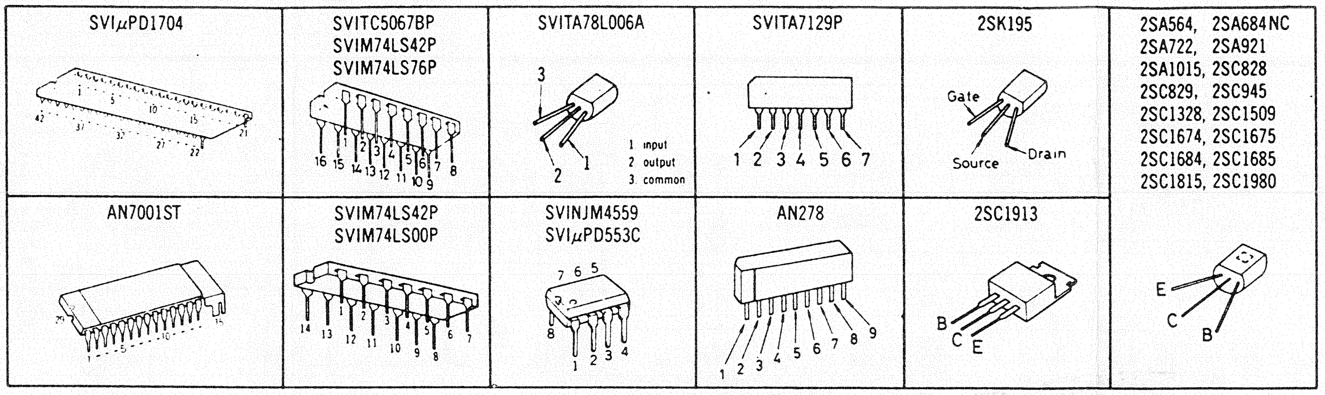
IC101
AN278
FM IF AMP

1	6.2	4	7.0	7	0
2	6.2	5	10.3	8	7.5
3	6.7	6	7.0	9	6.9

B

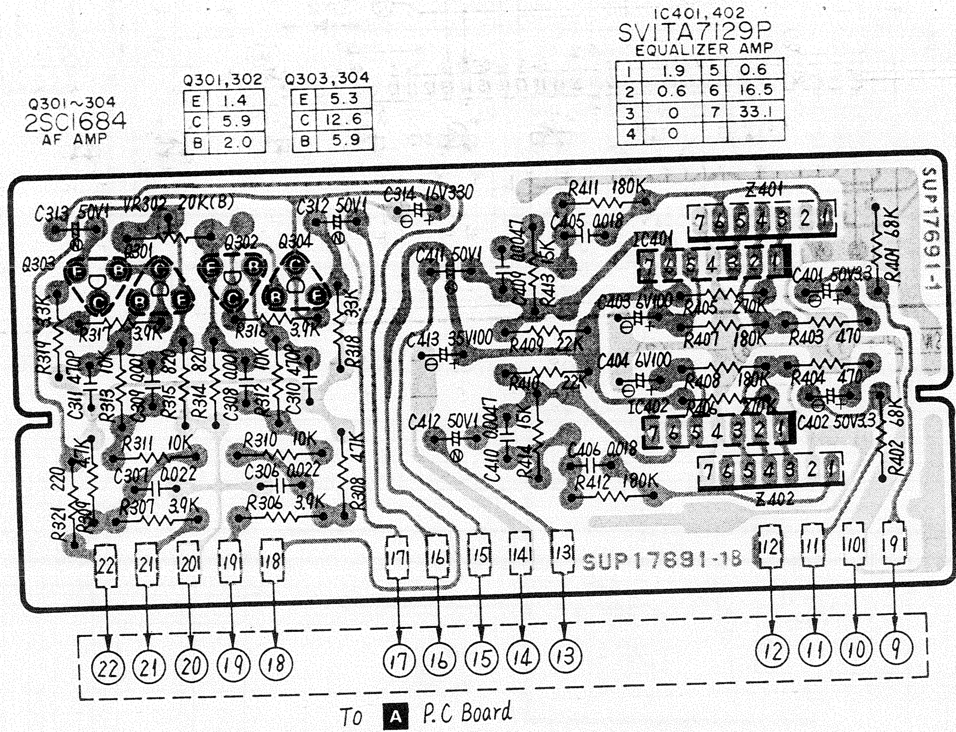

Q790
R792 56K
100K
R794
D792
Q791
6V220
Q790
4.6
0.6
D790
100K
R793
R791 100
D791
701
702
700
To A P.C.Board
Q790,791
2SC828
SWITCHING

■ TERMINAL GUIDE OF TRANSISTORS AND IC'S


SVIμPD1704
SVITC5067BP
SVIM74LS42P
SVIM74LS76P
SVITA78L006A
1 input
2 output
3 common
SVITA7129P
2SK195
Gate
Source
Drain
2SA564, 2SA684NC
2SA722, 2SA921
2SA1015, 2SC828
2SC829, 2SC945
2SC1328, 2SC1509
2SC1674, 2SC1675
2SC1684, 2SC1685
2SC1815, 2SC1980
AN7001ST
SVIM74LS42P
SVIM74LS00P
SVINJM4559
SVIμPD553C
AN278
2SC1913
B
C
E

Notes:
1. S1: Active Antenna selector switch in "NORM
NORMAL ◄——► TUNED TYP
2. S2: Clock call switch.
3. S3: Tuner preamp. off switch.
4. S4: Manual tuning (down) switch.
5. S5: Manual tuning (up) switch.
6. S6: Memory write switch.
7. S7 – S16: Preset-tuning switch.
8. S17: Input selector (FM) switch.
9. S18: Input selector (AM) switch.
10. S19: Input selector (phono) switch.
11. S20: Input selector (aux) switch.
12. S21: Tape monitor switch.

C


IC401,402
SVITA7129P
EQUALIZER AMP
1 1.9 5 0.6
2 0.6 6 16.5
3 0 7 33.1
4 0
Q301~304
2SC1684
AF AMP
Q301,302
E 1.4
C 5.9
B 2.0
Q303,304
E 5.3
C 12.6
B 5.9
SUP17691-1
SUP17691-18
VR302 20K(B)
C313 50V1
C312 50V1
C314 16V330
R411 180K
Z401
C405 0.018
IC401
C401 50V3.3
R401 68K
C411 50V1
C413 35V100
C403 6V100
R405 270K
R409 22K
R407 180K
R403 470
C404 6V100
R410 22K
R408 180K
R404 470
IC402
R406 270K
C402 50V3.3
C412 50V1
C410 0.0047
C406 0.018
R412 180K
Z402
R402 68K
Q303
Q301
Q302
Q304
R319 33K
R317 3.9K
R318 3.9K
R318
R314 820
R313
C311 470P
R311 10K
R310 10K
C307 0.022
C306 0.022
R308 4.7K
R307 3.9K
R306 3.9K
R321 220
22 21 20 19 18 17 16 15 14 13 12 11 10 9
To A P.C Board

* The waveforms of tuner pre-amplifier remote control terminal pins ① and ③ are as follows:

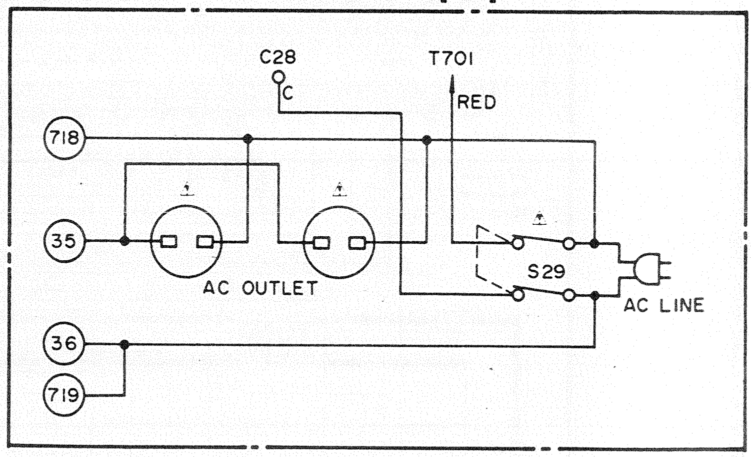
Pin ① (SELECTOR CH)

1CH ——► 10ms + zero (0) pulse
2CH ——► 10ms + one (1) pulse
3CH ——► 10ms + two (2) pulses
4CH ——► 10ms + three (3) pulses
5CH ——► 10ms + four (4) pulses
6CH ——► 10ms + five (5) pulses
7CH ——► 10ms + six (6) pulses
8CH ——► 10ms + seven (7) pulses
FM ——► 10ms + thirteen (13) pulses
Phono ——► 10ms + fourteen (14) pulses
AM ——► 10ms + fifteen (15) pulses

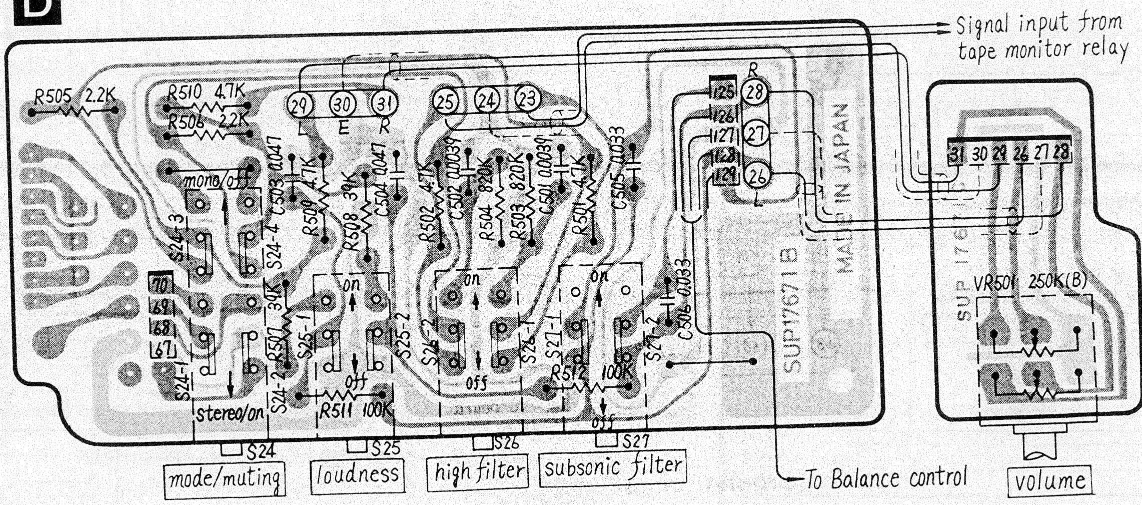
Pin ③ (BACK UP +B)

Last sound holding voltage to activate the electronic volume control is added to this pin.

• **Products for [DM]**


C28
T701
RED
718
35
36
719
AC OUTLET
S29
AC LINE

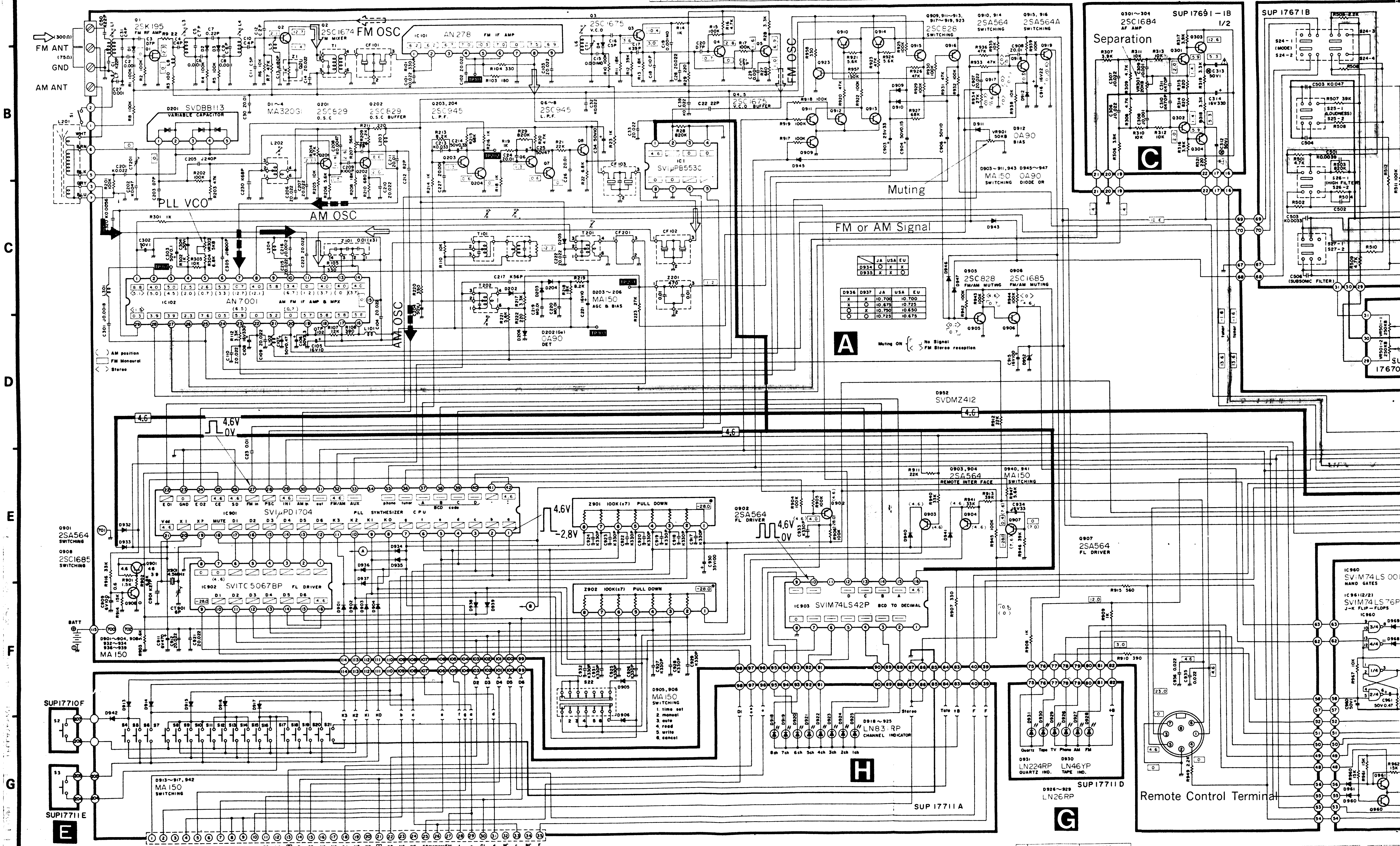
D


Signal input from
tape monitor relay
R505 2.2K
R510 4.7K
R506 2.2K
29 30 31
E R
25 24 23
28 27 26
31 30 29 26 27 28
mono/off
C503 0.047
C504 0.047
R509 4.7K
R508 39K
R502 4.7K
R504 820K
R503 820K
R501 4.7K
C505 0.033
S24-3
S24-4
S24-2
S24-1
S25-1
S25-2
S26-1
S27-1
S27-2
on
off
stereo/on
R511 100K
R512 100K
C506 0.033
MADE IN JAPAN
SUP17671B
SUP176
VR501 250K(B)
S24
S25
S26
S27
mode/muting
loudness
high filter
subsonic filter
To Balance control
volume

13. S22: Program mode switch in **"time set"** position.
① time set ◄–► ② manual ◄–► ③ auto ◄–► ④ read ◄–► ⑤ write ◄–►
⑥ cancel
14. S24: Mode/FM. AM muting switch in **"stereo/on"** position.
stereo/on ◄——► mono/off
15. S25: Loudness switch in **"off"** position.
16. S26: Hight filter switch in **"off"** position.
17. S27: Subsonic filter switch in **"off"** position.
18. S28: Voltage adjuster switch in **"240V"** position.
① 110V ◄–► ② 120V ◄–► ③ 220V ◄–► ④ 240V
19. S29: Power source switch in **"on"** position.
20. S30: Frequency allocation switch in **"AM 9kHz step, FM 50kHz step"** position.
AM 9kHz step, FM 50kHz step ◄–► AM 10kHz step, FM 200kHz step
* Product for [XA] only.

21. ⚠ Indicates that only parts specified by the manufacuturer be used for safety.
22. Indicated voltage values are the standard values for the unit measured by the DC electronic circut tester (high impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
▭ Voltage during FM minaural or non-signal reception.
( ) Voltage in AM mode.
< > Voltage during FM stereo reception.
⌐ ⌙ Voltage during muting circuit operation.
(( )) Voltage is Tuner preamp. off switch in on position (push condition)
23. Signal lines
⟹ FM ➡ AM AF

	Q910			Q911			Q912			Q913			Q914			Q915			Q916		
	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
EXT	12.8	0	12.8	4.4	10.9	10.0	4.4	12.7	10.0	0	10.0	10.0	12.6	0	12.8	12.2	12.8	12.8	12.2	12.8	12.8
FM	12.8	0	12.8	0	0.7	0	0	12.6	0	0	0	0	12.0	2.8	12.8	12.2	12.8	12.8	12.6	−14.8	12.8
AM	12.2	12.8	12.8	0.7	0	0	0.7	0	0	12.8	9.5	0	12.5	0	12.8	12.6	−14.8	12.8	12.2	12.8	12.8


FM ANT
(300Ω)
(75Ω)
GND
AM ANT
Q1 2SK195 FM RF AMP
Q2 2SC1674 FM MIXER
FM OSC
CF101
IC101 AN278 FM IF AMP
Q3 2SC1675 V.C.O
Q4, 5 2SC1675 V.C.O BUFFER
Q909, 911~913, 917~919, 923 2SC828 SWITCHING
Q910, 914 2SA564 SWITCHING
Q915, 916 2SA564A SWITCHING
D201 SVDBB113 VARIABLE CAPACITOR
D1~4 MA320GI
Q201 2SC829 O.S.C
Q202 2SC829 O.S.C BUFFER
Q203, 204 2SC945
Q6~8 2SC945 L.P.F.
IC1 SVIµPB553C
CF103
PLL VCO
AM OSC
Muting
D911
VR901 50KB
D912 OA90 BIAS
D903~911, 943 MA150 SWITCHING
D945~947 OA90 DIODE OR
FM or AM Signal
D943
T101
T201
CF201
CF102
T202
Z201
D203~206 MA150 AGC & BIAS
D202 (Ge) OA90 DET
IC102 AN7001 AM FM IF AMP & MPX
AM OSC
( ) AM position
⌐ ⌐ FM Monaural
< > Stereo
Q301~304 2SC1684 AF AMP
SUP 17691-1B 1/2
Separation
C
SUP 17671B
S24-1 (MODE)
S24-2
S25-1 (LOUDNESS)
S25-2
S26-1 (HIGH FILTER)
S26-2
S27-1
S27-2
C506 (SUBSONIC FILTER)
VR501-1 250KB
VR501-2 250KB
Q905 2SC828 FM/AM MUTING
Q906 2SC1685 FM/AM MUTING
A
D952 SVDMZ412
4.6
4.6V
0V
IC901 SVIµPD1704 PLL SYNTHESIZER CPU
Z901 100K(×7) PULL DOWN
Z902 100K(×7) PULL DOWN
4.6V
−2.8V
Q902 2SA564 FL DRIVER
4.6V
0V
Q903, 904 2SA564 REMOTE INTER FACE
D940, 941 MA150 SWITCHING
Q907 2SA564 FL DRIVER
Q901 2SA564 SWITCHING
Q908 2SC1685 SWITCHING
X901 4.5MHz
IC902 SVITC5067BP FL DRIVER
IC903 SVIM74LS42P BCD TO DECIMAL
BATT
D901~904, 906~908, 932~934, 936~939 MA150
S22
D905, 906 MA150 SWITCHING
1. time set
2. manual
3. auto
4. read
5. write
6. cancel
D918~925 LN831RP CHANNEL INDICATOR
8ch 7ch 6ch 5ch 4ch 3ch 2ch 1ch
H
SUP17710F
S2
SUP17711E
S3
E
D913~917, 942 MA150 SWITCHING
SUP 17711A
F Stereo NC b g NC G7 AM kHz e G6 NC 3 Dp G5 NC NC G4 NC NC 2 G3 NC NC G2 memory FM MHz f a G1 d NC c NC F
D931 LN224RP QUARTZ IND.
D930 LN46YP TAPE IND.
Quartz Tape TV Phono AM FM
D926~929 LN26RP
SUP 17711D
G
Remote Control Terminal
IC960 SVIM74LS00 NAND GATES
IC961(2/2) SVIM74LS76P J-K FLIP-FLOPS
D960
Q960
Q961

	JA	USA	EU
D934	○	x	x
D935	x	x	○

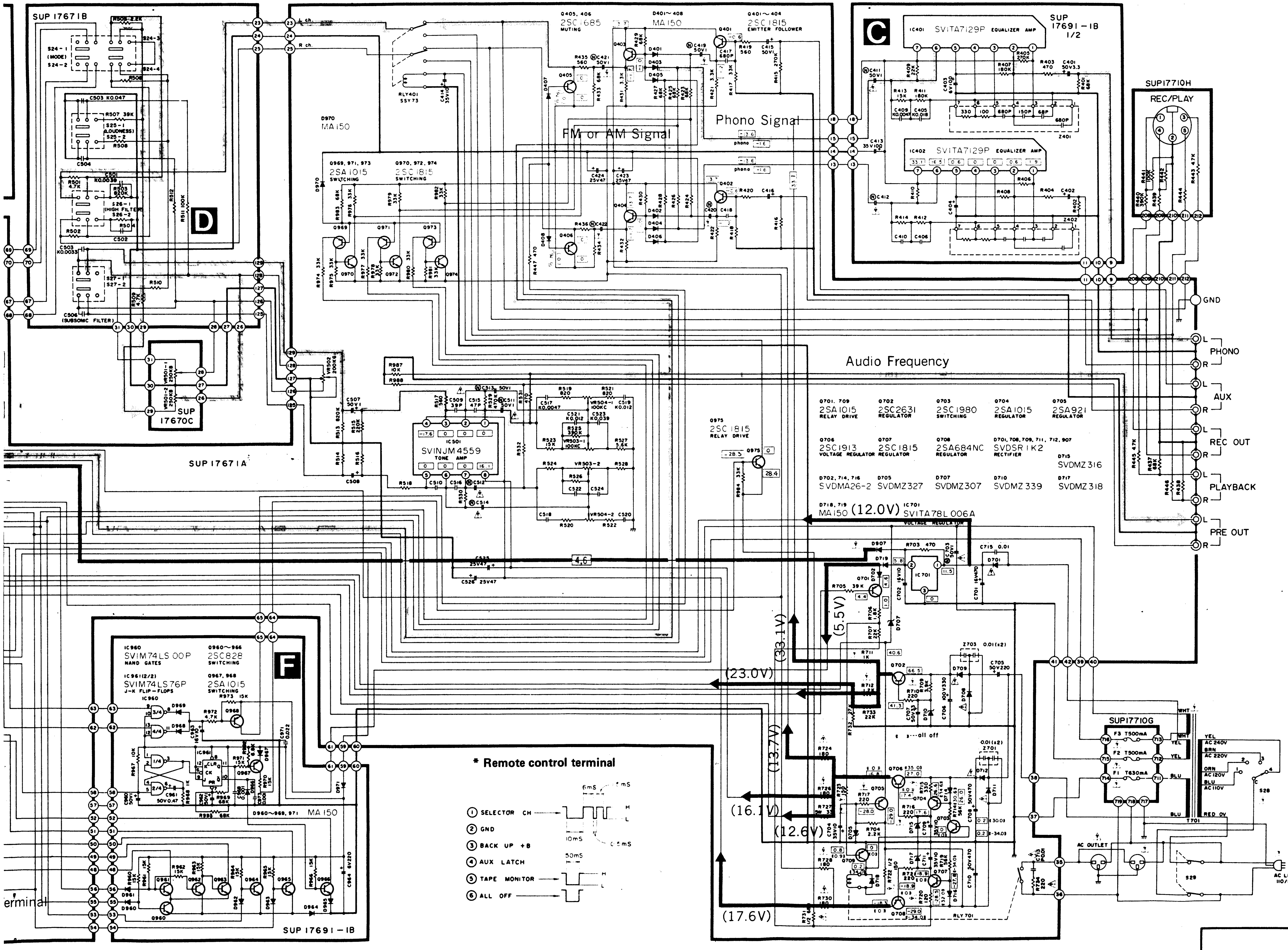
D936	D937	JA	USA	EU
x	x	10.700	10.700	
x	○	10.675	10.725	
○	x	10.750	10.650	
○	○	10.725	10.675	

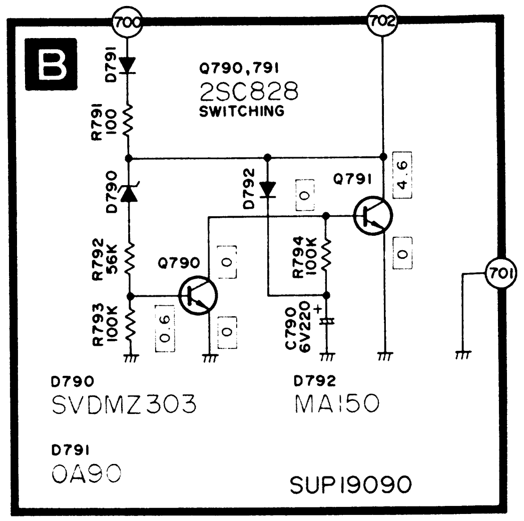
Muting ON { ⌐ ⌐ No Signal
< > FM Stereo reception

	Q967			Q968		
	B	C	E	B	C	E
FM	3.8	4.2	−30.0	5.5	0	5.5
AM	3.8	4.2	−30.0	4.4	5.0	5.0
phono	3.8	4.2	−30.0	5.5	0	5.5
tape	3.1	3.8	3.7	5.5	0	5.5

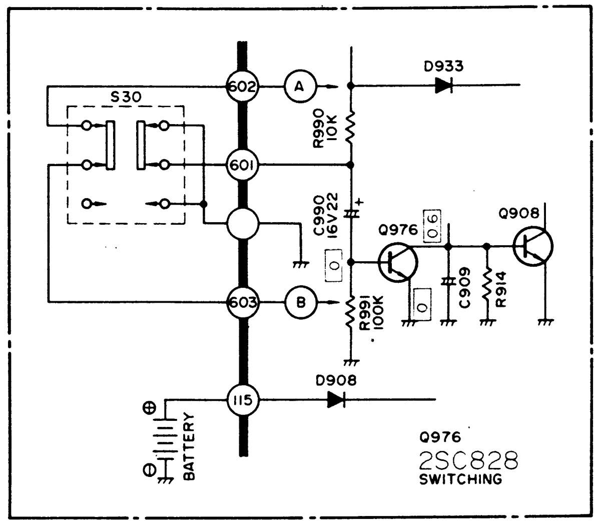
	Q960			Q961			Q962			Q963			
	B	C	E	B	C	E	B	C	E	B	C	E	B
FM	1.4	0.8	0.7	0.6	1.4	0.8	1.4	1.4	0.7	1.4	0.9	0.7	0.6
AM	1.4	0.8	0.7	1.6	1.0	0.8	1.4	0.8	0.7	0.8	1.4	0.7	0.6
Phono	0.6	2.5	0.7	2.9	2.5	2.5	0.6	0.7	0.7	0.7	1.4	0.7	1.4
aux	0.6	2.5	0.7	2.9	2.5	2.5	0.6	0.7	0.7	0.7	1.4	0.7	0.6

	Q969			Q970			Q971			Q972			Q973			Q974		
	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
Tuner	0.6	−14.0	1.1	−14.0	−14.7	−14.7	0.6	−14.7	0	−14.7	13.5	−14.7	0.6	−14.7	0	−14.6	13.5	−14.7
FM	0.6	−14.6	0	−14.6	13.5	−14.7	0.6	−14.0	1.1	−14.0	−14.7	−14.7	0.6	−14.7	0	−14.6	13.5	−14.7
AM	0.6	−14.6	0	−14.6	13.5	−14.7	0.6	−14.7	0	−14.7	13.5	−14.7	0.6	−14.0	1.1	−14.0	−14.7	−14.7

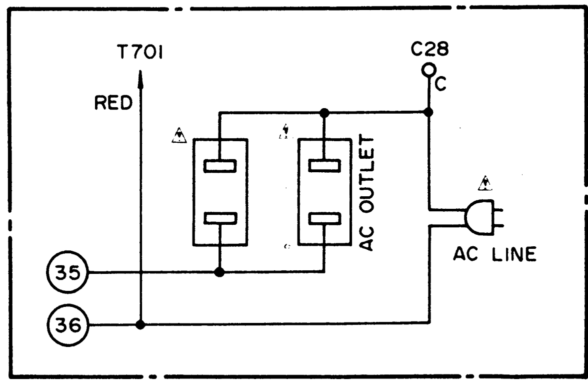

SUP 17671B
S24-1 (MODE)
S24-2
S24-3
S24-4
R505 2.2K
R506
C503 K0.047
R507 39K
S25-1 (LOUDNESS)
S25-2
R508
C504
C501 K0.0039
R501 4.7K
R503 820K
S26-1 (HIGH FILTER)
S26-2
R504
R502
C502
R512
R511 100K
D
C505 K0.0033
S27-1
S27-2
R510
R509
C506 (SUBSONIC FILTER)
VR501-1 250KB
VR501-2 250KB
SUP 17670C
SUP 17671A
L ch.
R ch.
Q405, 406
2SC1685
MUTING
D401~408
MA150
Q401~404
2SC1815
EMITTER FOLLOWER
RLY401
SSY73
FM or AM Signal
Phono Signal
phono
D970
MA150
Q969, 971, 973
2SA1015
SWITCHING
Q970, 972, 974
2SC1815
SWITCHING
C
SUP 17691-1B 1/2
IC401 SVITA7129P EQUALIZER AMP
IC402 SVITA7129P EQUALIZER AMP
Z401
Z402
SUP17710H
REC/PLAY
GND
PHONO
AUX
REC OUT
PLAYBACK
PRE OUT
Audio Frequency
VR502 200KG
R987 10K
R988
IC501
SVINJM4559
TONE AMP
VR504-1 100KC
VR503-1 100KC
VR503-2
VR504-2
Q975
2SC1815
RELAY DRIVE
Q701, 709
2SA1015
RELAY DRIVE
Q702
2SC2631
REGULATOR
Q703
2SC1980
SWITCHING
Q704
2SA1015
REGULATOR
Q705
2SA921
REGULATOR
Q706
2SC1913
VOLTAGE REGULATOR
Q707
2SC1815
REGULATOR
Q708
2SA684NC
REGULATOR
D701, 708, 709, 711, 712, 907
SVDSR1K2
RECTIFIER
D715
SVDMZ316
D702, 714, 716
SVDMA26-2
D705
SVDMZ327
D707
SVDMZ307
D710
SVDMZ339
D717
SVDMZ318
D718, 719
MA150
(12.0V)
IC701
SVITA78L006A
VOLTAGE REGULATOR
4.6
(5.5V)
(33.1V)
(23.0V)
(13.7V)
(16.1V)
(12.6V)
(17.6V)
Z703 0.01(×2)
Z701 0.01(×2)
all off
RLY701
SUP17710G
F3 T500mA
F2 T500mA
F1 T630mA
T701
WHT
YEL
BLU
BRN
ORN
RED
AC 240V
AC 220V
AC 120V
AC 110V
S28
S29
AC OUTLET
AC LINE 110/120/220/240V
F
IC960
SVIM74LS00P
NAND GATES
IC961(2/2)
SVIM74LS76P
J-K FLIP-FLOPS
Q960~966
2SC828
SWITCHING
Q967, 968
2SA1015
SWITCHING
D960~969, 971 MA150
SUP 17691-1B
erminal
* Remote control terminal
① SELECTOR CH
② GND
③ BACK UP +B
④ AUX LATCH
⑤ TAPE MONITOR
⑥ ALL OFF
6mS
6mS
10mS
6.5mS
50mS
H
L


B
Q790, 791
2SC828
SWITCHING
D791
R791 100
D790
D792
Q791
R792 56K
Q790
R794 100K
R793 100K
C790 6V220
D790
SVDMZ303
D792
MA150
D791
OA90
SUP19090
700
702
701

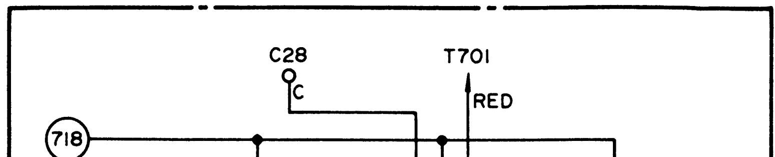
• Products for [XA]


S30
602
601
603
115
A
B
D933
R990 10K
C990 16V22
Q976
Q908
C909
R914
R991 100K
D908
BATTERY
Q976
2SC828
SWITCHING

• Products for [XA]


T701
C28
C
RED
AC OUTLET
AC LINE
35
36

• Products for [DM]

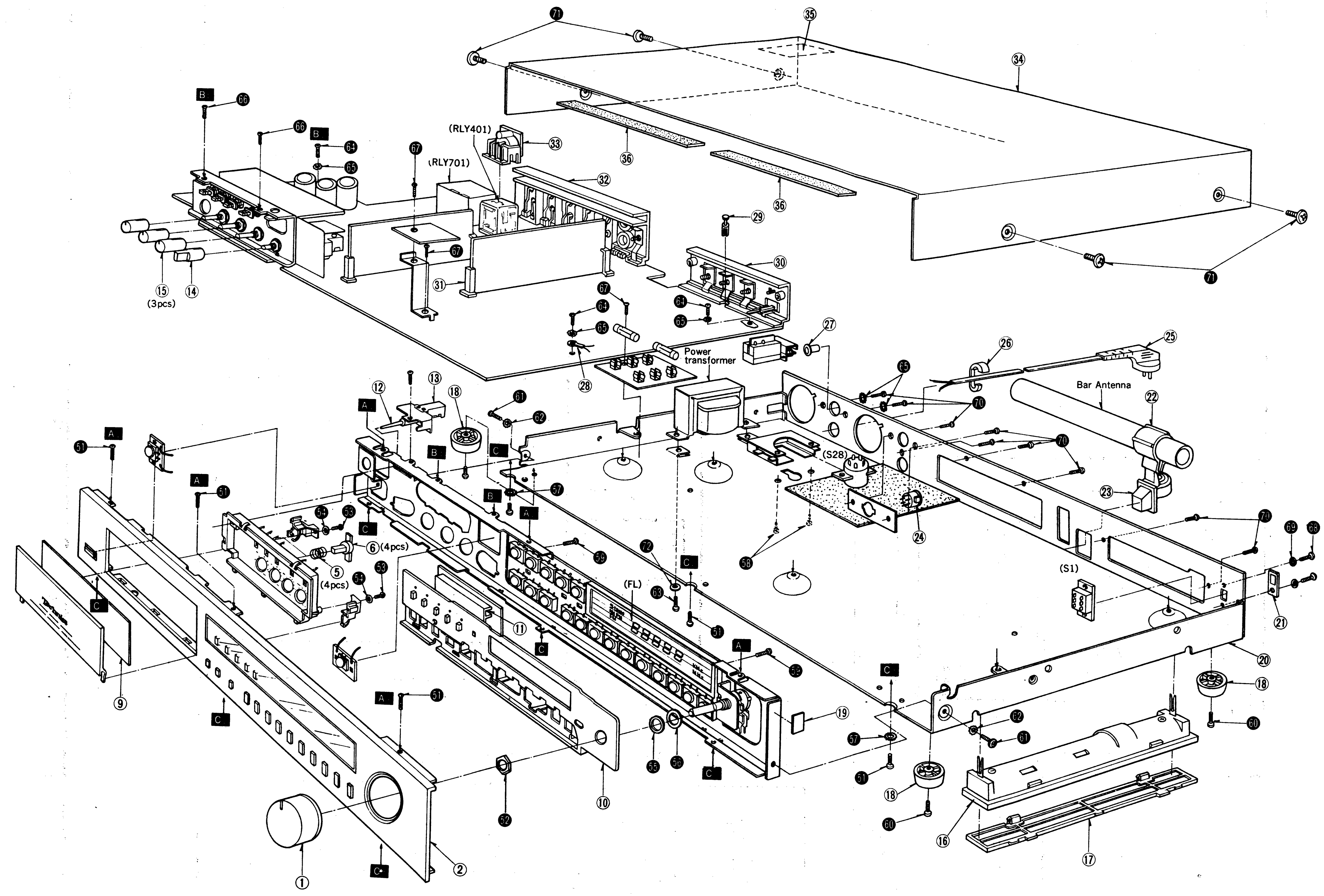

C28
C
T701
RED
718

Q961		Q962			Q963			Q964			Q965			Q966		
C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
1.4	0.8	1.4	1.4	0.7	1.4	0.9	0.7	0.6	2.0	0.7	0.6	1.6	0.7	0.6	11.0	0.7
1.0	0.8	1.4	0.8	0.7	0.8	1.4	0.7	0.6	2.0	0.7	0.6	1.6	0.7	0.6	11.0	0.7
2.5	2.5	0.6	0.7	0.7	0.7	1.4	0.7	1.4	0.8	0.7	0.6	1.6	0.7	0.6	11.0	0.7
2.5	2.5	0.6	0.7	0.7	0.7	1.4	0.7	0.6	2.0	0.7	1.4	0.8	0.7	0.6	11.0	0.7

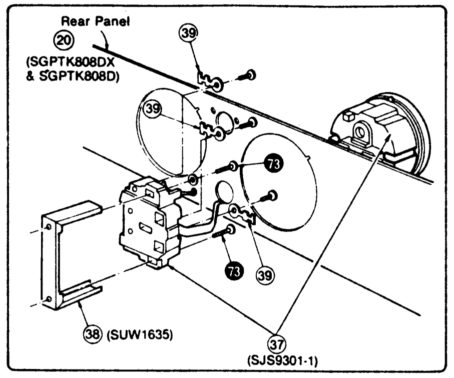
pin	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Normal	0	0	0	0	13.6	0	13.6	13.6	13.6	33.2	4.0	0	4.0	12.8
					−1.6		−1.6	−1.6	−1.6					
Selector					phono		phono	tuner	tuner					

pin	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
Normal	2.4	1.4	1.4	1.5	11.0	0.1	0	0	4.4	2.2	4.4	5.1	0	5.1	5.6	0	−29.0	0
Selector	1.0	1.0	0.8	0.8	1.0	3.6	4.4	3.6	0						5.1	4.3		5.1
	AM	FM	phono	aux	tape	phono	aux	tuner	FM						tuner	tuner		AM
Tuner preamp off	12	12	12	12	12	0	0	0	0	2.2	4.4	5.1	0	5.1	0	4.4	−33.0	5.1

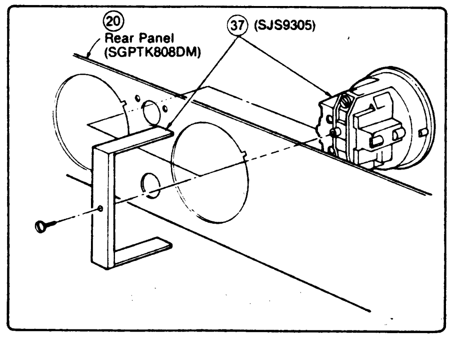
■ EXPLODED VIEWS


(RLY401)
(RLY701)
Power transformer
Bar Antenna
(S28)
(S1)
(FL)
(3pcs)
(4pcs)
(4pcs)
A
B
C

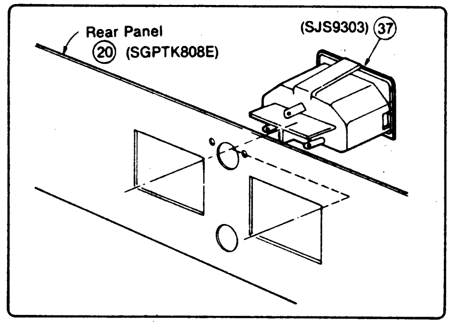
Products for [DX], [DG], [EB], [XGF], [XGH]


Rear Panel
⑳ (SGPTK808DX & SGPTK808D)
(38) (SUW1635)
(37) (SJS9301-1)

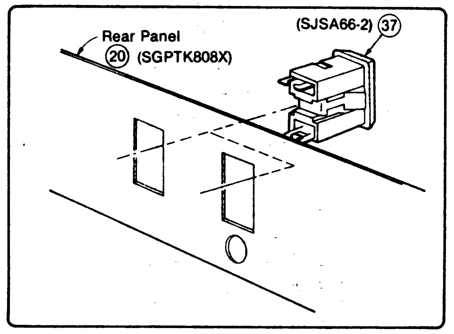
Products for [DM] only


⑳ Rear Panel (SGPTK808DM)
(37) (SJS9305)

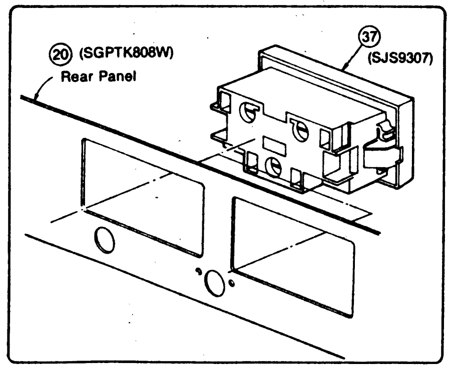
Products for [XE] only


Rear Panel
⑳ (SGPTK808E)
(SJS9303) (37)

Products for [XA] only


Rear Panel
⑳ (SGPTK808X)
(SJSA66-2) (37)

Products for [XSW] only


⑳ (SGPTK808W)
Rear Panel
(37) (SJS9307)

■ REPLACEMENT PARTS LIST...Cabinet and Chassis Parts

Notes: 1. Part numbers are indicated on most mechanical parts.
Please use this part number for parts orders.
2. ⚠ indicates that only parts specified by the manufacture be used for safety.

Ref. No.		Part No.	Part Name & Description
CABINET and CHASSIS PARTS			
1		SBN877	Knob, Volume
2		SYW245	Panel, Front Ass'y
2 [XA] only		SYW257	Panel, Front Ass'y
5		SUS191	Spring, Push Switches
6		SBC253	Button, Push Switches
9		SQX4737	Label, Operation
10		SYETK808D	Orrament, FL
11		SHR9501	Spacer, Light Emitting Diode
12		SBC255	Button, Push Door
13		ESB71711	Push Door
14		SBS5	Knob, Program mode
15		SBN875-1	Knob, Balance, Treble and Bass
16		SYE697	Battery Box Ass'y
17		SJB9001	Cover, Battery Box
18		SKL227	Foot, Bottom Board
19		SHG6051-2	Rubber Cushion, Side Chassis
20 [DX] only		SGPTK808DX	Chassis
20 [DM] only		SGPTK808DM	Chassis
20 [XSW] only		SGPTK808W	Chassis
20 [XE] only		SGPTK808E	Chassis
20 [XA] only		SGPTK808X	Chassis
20 [DG, EB, XGF, XGH]		SGPTK808D	Chassis
21		SHR5073	Stopper, FM Antenna Selector
22		SMA205	Support, AM Bar Antenna
23		SMA207	Support, AM Bar Antenna
24		SJS6501	Tape (Rec/Play) DIN Socket
25 [DX, DG, EB XGF, XGH]	⚠	SJA103-1	AC Cord, Power Source
25 [DM] only	⚠	**SJA97**	AC Cord, Power Source
25 [XSW] only	⚠	SJA119	AC Cord, Power Source
25 [XE] only	⚠	**QFC1206M**	AC Cord, Power Source
25 [XA] only	⚠	SJA121	AC Cord, Power Source
26 [DX, XSW, XE, DG, EB, XGF, XGH]		SHR131	Bushing, AC Cord
26 [DM, XA]		SHR127	Bushing, AC Cord
27 Except [XA]		SBC157	Button, Power Switch
28		RJT202B	Lug, Earth Terminal
29		SHR401-1	Lockpin, FM/AM Antenna Terminal
30		SJF4419-2	Terminal, FM/AM Antenna
31		SHR9503	Support, P.C.B.
32		SJF8023	Terminal, Phono, Aux, Tape & Output
33		SJS6805	Control Signal Line Socket
34		SKC190H	Cabinet
35 Except [XSW, XA]		SMX253	Sheet, Insulator
36		SHS6101-1	Fiber, Cabinet
37 [DX, DG, EB, XGF, XGH]	⚠	SJS9301-1	AC Outlet
37 [DM] only	⚠	SJS9305	AC Outlet
37 [XSW] only	⚠	SJS9307	AC Outlet
37 [XE] only	⚠	SJS9303	AC Outlet
37 [XA] only	⚠	SJSA66-2	AC Outlet
38 [DX, DG, EB XGF, XGH]		SUW1635	Bracket, AC Outlet
39 [DX, DG, EB XGF, XGH]		RJT204A	Lug, Connection Terminal
ACCESSORIES			
A1		SSA267	Cord, FM Indoor Antenna
A2 [XA] only		RJP74-1	Plug Adapter, AC Power
A3 [XA] only		RJP75	Plug Adapter, AC Power
PACKING PARTS			
P1		SPG2347	Carton Box
P1 [XE, XA] only		SPG2345	Carton Box
P2		SPS2399-2	Pad, Left
P2 [XE, XA] only		SPS2399-1	Pad, Left
P3		SPS2401-1	Pad, Right
P3 [XE, XA] only		SPS2401	Pad, Right
P4		SPS2491	Pad, Front
P5		SPS2433	Pad, Top
P6		SQF10337-1	Instructions Book, Printed Matter
P6 [XE, XA] only		SQF10339	Instructions Book, Printed Matter
P6 [XGH] only		SQF10337	Instructions Book, Printed Matter
P7		SPP659	Polyethylene Bag
SCREWS and WASHERS			
●		**XTB3+8BFZ**	Screw, Front Panel
●		**XNS8**	Nut, F.L Orrament
●		**XTN3+8B**	Screw, Hinge
●		**XWG3**	Washer, Hinge
●		**XNS8**	Nut, Volume, Balance, Tone & Mode
●		**XWC8B**	Washer, Volume, Balance, Tone & Mode
●		**XWC3B**	Washer, Front Panel Screw
●		**XTB3+16BFN**	Screw, Voltage Adjuster Switch
●		**XTB3+12BFN**	Screw, Display & Switches
●		**XTB3+10BFZ**	Screw, Set Foot M'tg
●		**XTB3+8BFZ**	Screw, Side Chassis M'tg
●		**XWC3B**	Washer, Side Chassis Screw
●		**XSN4+10S**	Screw, Power Transformer M'tg
●		**XTB3+8BFN**	Screw, Main P.C.B. & Power Switch M'tg
●		**XWC3B**	Washer, Main P.C.B. Screw
●		**XTB3+6BFN**	Screw, Chassis front M'tg
●		**XTB3+8BFN**	Screw, Fuse P.C.B. M'tg
●		**XSN3+6S**	Screw, Antenna Selector Switch M'tg
●		**XWA3B**	Washer, Antenna Selector Switch Screw
●		**XTB3+8BFZ**	Screw, Power Switch, Antenna, Input & DIN Socket M'tg
●		**XTB4+8BFN**	Screw, Cabinet
●		**XWA4B**	Washer, Power Transformer Screw
●		**XTB3+16BFN**	Screw, AC Outlet

Areas

- (DX) is available in Scandinavia except Denmark and European.
- (DG) is available in Scandinavia and European except Switzerland.
- (DM) is available in Denmark.
- (EB) is available in Belgium.
- (XE) is available in United Kingdom.
- (XSW) is available in Switzerland.
- (XGH) is available in Holland.
- (XGF) is available in France.
- (XA) is available in Asia, Latin America, Middle East and Africa.

■ REPLACEMENT PARTS LIST...Resistors and Capacitors

Notes: 1. Part numbers are indicated on most mechanical parts.
Please use this part number for parts orders.
2. ⚠ indicates that only parts specified by the manufacture be used for safety.

Ref. No.		Part No.	Part Name & Dscription
RESISTORS			
R1, 2		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R3		**ERD10TJ101**	Carbon, 100Ω, 1/8W, ± 5%
R4, 5		**ERD25TJ104**	Carbon 100kΩ, 1/4W, ± 5%
R6		**ERD10TJ103**	Carbon, 10kΩ, 1/8W, ± 5%
R7		**ERD10TJ473**	Carbon, 47kΩ, 1/8W, ± 5%
R8		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R10		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R11		**ERD10TJ183**	Carbon, 18kΩ, 1/8W, ± 5%
R12		**ERD10TJ393**	Carbon, 39kΩ, 1/8W, ± 5%
R13		**ERD10TJ182**	Carbon, 1.8kΩ, 1/8W, ± 5%
R14		**ERD10TJ102**	Carbon, 1kΩ, 1/8W, ± 5%
R15		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R16		**ERD10TJ472**	Carbon, 4.7kΩ, 1/8W, ± 5%
R17		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R18, 19		**ERD10TJ102**	Carbon, 1kΩ, 1/8W, ± 5%
R20		**ERD10TJ472**	Carbon, 4.7kΩ, 1/8W, ± 5%
R21		**ERD10TJ223**	Carbon, 22kΩ, 1/8W, ± 5%
R22		**ERD10TJ682**	Carbon, 6.8kΩ, 1/8W, ± 5%
R23		**ERD10TJ102**	Carbon, 1kΩ, 1/8W, ± 5%
R25		**ERD10TJ221**	Carbon, 220Ω, 1/8W, ± 5%
R26		**ERD10TJ332**	Carbon, 3.3kΩ, 1/8W, ± 5%
R27		**ERD10TJ681**	Carbon, 680Ω, 1/8W, ± 5%
R28, 29		**ERD25TJ824**	Carbon, 820kΩ, 1/4W, ± 5%
R101		**ERD10TJ331**	Carbon, 330Ω, 1/8W, ± 5%
R103		**ERD10TJ181**	Carbon, 180Ω, 1/8W, ± 5%
R104, 105		**ERD10TJ331**	Carbon, 330Ω, 1/8W, ± 5%
R107		**ERD10TJ123**	Carbon, 12kΩ, 1/8W, ± 5%
R108		**ERD25FJ391**	Carbon, 390Ω, 1/4W, ± 5%
R110		**ERD10TJ103**	Carbon, 10kΩ, 1/8W, ± 5%
R111		**ERO25CKF3001**	Metal Film, 3kΩ, 1/4W, ± 1%
R112		**ERD10TJ332**	Carbon, 3.3kΩ, 1/8W, ± 5%
R201, 202		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R203, 204		**ERD10TJ473**	Carbon, 47kΩ, 1/8W, ± 5%
R205		**ERD10TJ103**	Carbon, 10kΩ, 1/8W, ± 5%
R206		**ERD10TJ562**	Carbon, 5.6kΩ, 1/8W, ± 5%
R207		**ERD25TJ563**	Carbon, 56kΩ, 1/4W, ± 5%
R208		**ERD10TJ183**	Carbon, 18kΩ, 1/8W, ± 5%
R209		**ERD10TJ122**	Carbon, 1.2kΩ, 1/8W, ± 5%
R210		**ERD10TJ681**	Carbon, 680Ω, 1/8W, ± 5%
R211		**ERD10TJ221**	Carbon, 220Ω, 1/8W, ± 5%
R213		**ERD10TJ822**	Carbon, 8.2kΩ, 1/8W, ± 5%
R214		**ERD10TJ102**	Carbon, 1kΩ, 1/8W, ± 5%
R215		**ERD25TJ683**	Carbon, 68kΩ, 1/4W, ± 5%
R216		**ERD10TJ102**	Carbon, 1kΩ, 1/8W, ± 5%
R217		**ERD10TJ332**	Carbon, 3.3kΩ, 1/8W, ± 5%
R218		**ERD10TJ183**	Carbon, 18kΩ, 1/8W, ± 5%
R219		**ERD10TJ822**	Carbon, 8.2kΩ, 1/8W, ± 5%
R220		**ERD10TJ391**	Carbon, 390Ω, 1/8W, ± 5%
R221		**ERD10TJ562**	Carbon, 5.6kΩ, 1/8W, ± 5%
R222		**ERD10TJ221**	Carbon, 220Ω, 1/8W, ± 5%
R223		**ERD10TJ273**	Carbon, 27kΩ, 1/8W, ± 5%
R301, 302		**ERD10TJ102**	Carbon, 1kΩ, 1/8W, ± 5%
R303		**ERD10TJ103**	Carbon, 10kΩ, 1/8W, ± 5%
R304		**ERD10TJ682**	Carbon, 6.8kΩ, 1/8W, ± 5%
R306, 307		**ERD25FJ392**	Carbon, 3.9kΩ, 1/4W, ± 5%
R308, 309		**ERD25FJ472**	Carbon, 4.7kΩ, 1/4W, ± 5%
R310, 311		**ERD25FJ103**	Carbon, 10kΩ, 1/4W, ± 5%
R312, 313		**ERD25FJ103**	Carbon, 10kΩ, 1/4W, ± 5%
R314, 315		**ERD25FJ821**	Carbon, 820Ω, 1/4W, ± 5%
R316, 317		**ERD25FJ392**	Carbon, 3.9kΩ, 1/4W, ± 5%
R318, 319		**ERD25FJ332**	Carbon, 3.3kΩ, 1/4W, ± 5%
R321		**ERD25FJ221**	Carbon, 220Ω, 1/4W, ± 5%
R401, 402		**ERD25TJ683**	Carbon, 68kΩ, 1/4W, ± 5%
R403, 404		**ERD25FJ471**	Carbon, 470Ω, 1/4W, ± 5%
R405, 406		**ERO25CKJ2703**	Metal Film, 270kΩ, 1/4W, ± 1%
R407, 408		**ERD25TJ184**	Carbon, 180kΩ, 1/4W, ± 5%
R409, 410		**ERD25TJ223**	Carbon, 22kΩ, 1/4W, ± 5%
R411, 412		**ERD25TJ184**	Carbon, 180kΩ, 1/4W, ± 5%
R413, 414		**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ± 5%
R415, 416		**ERD25TJ274**	Carbon, 270kΩ, 1/4W, ± 5%
R417, 418		**ERD10TJ333**	Carbon, 33kΩ, 1/8W, ± 5%
R419, 420		**ERD10TJ561**	Carbon, 560Ω, 1/8W, ± 5%
R421, 422		**ERD10TJ332**	Carbon, 3.3kΩ, 1/8W, ± 5%
R423, 424		**ERD25TJ683**	Carbon, 68kΩ, 1/4W, ± 5%
R425, 426		**ERD25TJ683**	Carbon, 68kΩ, 1/4W, ± 5%
R427, 428		**ERD25TJ683**	Carbon, 68kΩ, 1/4W, ± 5%
R429, 430		**ERD25TJ683**	Carbon, 68kΩ, 1/4W, ± 5%
R431, 432		**ERD10TJ332**	Carbon, 3.3kΩ, 1/8W, ± 5%
R433, 434		**ERD25TJ683**	Carbon, 68kΩ, 1/4W, ± 5%
R435, 436		**ERD10TJ561**	Carbon, 560Ω, 1/8W, ± 5%
R437, 438		**ERD25TJ683**	Carbon, 68kΩ, 1/4W, ± 5%
R439, 440		**ERD25TJ394**	Carbon, 390kΩ, 1/4W, ± 5%
R441, 442		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R443, 444		**ERD10TJ472**	Carbon, 4.7kΩ, 1/8W, ± 5%
R445, 446		**ERD10TJ472**	Carbon, 4.7kΩ, 1/8W, ± 5%
R447		**ERD10TJ471**	Carbon, 470Ω, 1/8W, ± 5%
R501, 502		**ERD10TJ472**	Carbon, 4.7kΩ, 1/8W, ± 5%
R503, 504		**ERD25TJ824**	Carbon, 820kΩ, 1/4W, ± 5%
R505, 506		**ERD10TJ222**	Carbon, 2.2kΩ, 1/8W, ± 5%
R507, 508		**ERD10TJ393**	Carbon, 39kΩ, 1/8W, ± 5%
R509, 510		**ERD10TJ472**	Carbon, 4.7kΩ, 1/8W, ± 5%
R511, 512		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R513, 514		**ERD25TJ824**	Carbon, 820kΩ, 1/4W, ± 5%
R515, 516		**ERD25TJ224**	Carbon, 220kΩ, 1/4W, ± 5%
R517, 518		**ERD10TJ561**	Carbon, 560Ω, 1/8W, ± 5%
R519, 520		**ERD10TJ821**	Carbon, 820Ω, 1/8W, ± 5%
R521, 522		**ERD10TJ821**	Carbon, 820Ω, 1/8W ± 5%
R523, 524		**ERD10TJ153**	Carbon, 15kΩ, 1/8W, ± 5%
R525, 526		**ERD25TJ394**	Carbon, 390kΩ, 1/4W, ± 5%
R527, 528		**ERD10TJ562**	Carbon, 5.6kΩ, 1/8W, ± 5%
R529, 530		**ERD25TJ474**	Carbon, 470kΩ, 1/4W, ± 5%
R531, 532		**ERD10TJ471**	Carbon, 470Ω, 1/8W, ± 5%
R703		**ERD10TJ471**	Carbon, 470Ω, 1/8W, ± 5%
R704		**ERD10TJ222**	Carbon, 2.2kΩ, 1/8W ± 5%
R705		**ERD10TJ393**	Carbon, 39kΩ, 1/8W, ± 5%
R706		**ERD10TJ182**	Carbon, 1.8kΩ, 1/8W, ± 5%
R707		**ERD10TJ223**	Carbon, 22kΩ, 1/8W, ± 5%
R709	⚠	**ERD25FJ392**	Carbon, 3.9kΩ, 1/4W, ± 5%
R710	⚠	**ERD25FJ221**	Carbon, 220Ω, 1/4W, ± 5%
R711	⚠	**ERD25FJ102**	Carbon, 1kΩ, 1/4W, ± 5%
R712	⚠	**ERD25FJ122**	Carbon, 1.2kΩ, 1/4W, ± 5%
R714		**ERD25TJ563**	Carbon, 56kΩ, 1/4W, ± 5%
R715	⚠	**ERD25FJ331**	Carbon, 330Ω, 1/4W, ± 5%
R716, 717	⚠	**ERD25FJ221**	Carbon, 220Ω, 1/4W, ± 5%
R719		**ERD25TJ563**	Carbon, 56kΩ, 1/4W, ± 5%
R720	⚠	**ERD25FJ121**	Carbon, 120Ω, 1/4W, ± 5%
R721		**ERD10TJ221**	Carbon, 220Ω, 1/8W, ± 5%
R722	⚠	**ERD50FJ151**	Carbon, 150Ω, 1/2W, ± 5%
R723	⚠	**ERD25FJ151**	Carbon, 150Ω, 1/4W, ± 5%
R724	⚠	**ERD25FJ181**	Carbon, 180Ω, 1/4W, ± 5%
R726	⚠	**ERD25FJ181**	Carbon, 180Ω, 1/4W, ± 5%
R727	⚠	**ERF5AJ330**	Non-Flammable, 33Ω, 5W, ± 5%
R728	⚠	**ERD25FJ181**	Carbon, 180Ω, 1/4W, ± 5%
R730	⚠	**ERD25FJ181**	Carbon, 180Ω, 1/4W, ± 5%
R731	⚠	**ERD50FJ681**	Carbon, 680Ω, 1/2W, ± 5%
R732		**ERD10TJ273**	Carbon, 27kΩ, 1/8W, ± 5%
R733		**ERD10TJ223**	Carbon, 22kΩ, 1/8W, ± 5%
R734	⚠	**ERD25FJ221**	Carbon, 220Ω, 1/4W, ± 5%
R790		**ERD25FJ101**	Carbon, 100Ω, 1/4W, ± 5%
R792		**ERD25TJ563**	Carbon, 56kΩ, 1/4W, ± 5%
R793, 794		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R901		**ERD10TJ152**	Carbon, 1.5kΩ, 1/8W, ± 5%
R902		**ERD10TJ682**	Carbon, 6.8kΩ, 1/8W, ± 5%
R903		**ERD10TJ562**	Carbon, 5.6kΩ, 1/8W, ± 5%
R904, 905		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R906		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R907		**ERD10TJ331**	Carbon, 330Ω, 1/8W, ± 5%
R908, 909		**ERD10TJ102**	Carbon, 1kΩ, 1/8W, ± 5%
R910		**ERD10TJ391**	Carbon, 390Ω, 1/8W, ± 5%
R911	⚠	**ERD50FJ223**	Carbon, 22kΩ, 1/2W, ± 5%
R912		**ERD10TJ223**	Carbon, 22kΩ, 1/8W, ± 5%
R913		**ERD10TJ393**	Carbon, 39kΩ, 1/8W, ± 5%
R914		**ERD10TJ153**	Carbon 15kΩ, 1/8W, ± 5%
R915		**ERD10TJ561**	Carbon, 560Ω, 1/8W, ± 5%
R916		**ERD10TJ333**	Carbon, 33kΩ, 1/8W, ± 5%
R917, 918		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R919		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R920		**ERD10TJ473**	Carbon, 47kΩ, 1/8W, ± 5%
R921		**ERD10TJ562**	Carbon, 5.6kΩ, 1/8W, ± 5%
R922		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R923		**ERD10TJ473**	Carbon 47kΩ, 1/8W, ± 5%

Ref. No.		Part No.	Part Name & Description
R924		**ERD10TJ562**	Carbon, 5.6kΩ, 1/8W, ± 5%
R925		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R926		**ERD10TJ473**	Carbon, 47kΩ, 1/8W, ± 5%
R927		**ERD25TJ683**	Carbon, 68kΩ, 1/4W, ± 5%
R929, 930		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R931		**ERD10TJ473**	Carbon, 47kΩ, 1/8W, ± 5%
R932		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R933		**ERD10TJ473**	Carbon, 47kΩ, 1/8W, ± 5%
R934		**ERD10TJ273**	Carbon, 27kΩ, 1/8W, ± 5%
R935		**ERD10TJ103**	Carbon, 10kΩ, 1/8W, ± 5%
R936		**ERD10TJ473**	Carbon, 47kΩ, 1/8W, ± 5%
R938		**ERD10TJ103**	Carbon, 10kΩ, 1/8W, ± 5%
R939		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R940, 941		**ERD10TJ333**	Carbon, 33kΩ, 1/8W, ± 5%
R942, 943		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R944, 945		**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%
R946		**ERD10TJ393**	Carbon, 39kΩ, 1/8W, ± 5%
R947		**ERD10TJ562**	Carbon, 5.6kΩ, 1/8W, ± 5%
R949		**ERD10TJ222**	Carbon, 2.2kΩ, 1/8W, ± 5%
R957		**ERD25TJ154**	Carbon, 150kΩ, 1/4W, ± 5%
R958		**ERD10TJ331**	Carbon, 330Ω, 1/8W, ± 5%
R960, 961		**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ± 5%
R962, 963		**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ± 5%
R964, 965		**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ± 5%
R966		**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ± 5%
R967		**ERD25FJ103**	Carbon, 10kΩ, 1/4W, ± 5%
R968		**ERD25FJ102**	Carbon, 1kΩ, 1/4W, ± 5%
R969		**ERD25TJ683**	Carbon, 68kΩ, 1/4W, ± 5%
R970, 971		**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ± 5%
R972		**ERD25FJ472**	Carbon, 4.7kΩ, 1/4W, ± 5%
R973		**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ± 5%
R974		**ERD25FJ682**	Carbon, 6.8kΩ, 1/4W, ± 5%
R974, 975		**ERD10TJ333**	Carbon, 33kΩ, 1/8W, ± 5%
R976, 977		**ERD10TJ333**	Carbon, 33kΩ, 1/8W, ± 5%
R978, 979		**ERD10TJ333**	Carbon, 33kΩ, 1/8W, ± 5%
R980, 981		**ERD10TJ333**	Carbon, 33kΩ, 1/8W, ± 5%
R982		**ERD10TJ333**	Carbon, 33kΩ, 1/8W, ± 5%
R983		**ERD25TJ683**	Carbon, 68kΩ, 1/4W, ± 5%
R984		**ERD10TJ333**	Carbon, 33kΩ, 1/8W, ± 5%
R985		**ERD25TJ683**	Carbon, 68kΩ, 1/4W, ± 5%
R987, 988		**ERD10TJ103**	Carbon, 10kΩ, 1/8W, ± 5%
R990 [XA only]		**ERD10TJ103**	Carbon, 10kΩ, 1/8W, ± 5%
R991 [XA only]		**ERD10TJ104**	Carbon, 100kΩ, 1/8W, ± 5%
		CAPACITORS	
C1		ECCD1H220KC	Ceramic, 22pF, 50V, ± 10%
C2		ECKD1H102MDA	Ceramic, 0.001μF, 50V, ± 20%
C3		ECCD1H100KC	Ceramic, 10pF, 50V, ± 10%
C4		ECCD1H040CC	Ceramic, 4pF, 50V, ± 0.25pF
C5		ECCD1H070DC	Ceramic, 7pF, 50V, ± 0.5pF
C6		ECKD1H102MDA	Ceramic, 0.001μF, 50V, ± 20%
C7		ECGN5R22K	Ceramic, 0.22pF, 500V, ± 10%
C8		ECKD1H102MDA	Ceramic, 0.001μF, 50V, ± 20%
C9		ECCD1H060CC	Ceramic, 6pF, 50V, ± 0.25pF
C10		ECCD1H040CC	Ceramic, 4pF, 50V, ± 0.25pF
C11		ECCD1H050CC	Ceramic, 5pF, 50V, ± 0.25pF
C12		ECCD1H020CC	Ceramic, 2pF, 50V, ± 0.25pF
C13		ECCD1H181K	Ceramic, 180pF, 50V, ± 10%
C14		ECQM1H223KZ	Polyester, 0.022μF, 50V, ± 10%
C15		ECKD1H102MDA	Ceramic, 0.001μF, 50V, ± 20%
C16		ECCD1H050CC	Ceramic, 5pF, 50V, ± 0.25pF
C17		ECCD1H390KC	Ceramic, 39pF, 50V, ± 10%
C18		ECCD1H100KC	Ceramic, 10pF, 50V, ± 10%
C19		ECKD1H102MDA	Ceramic, 0.001μF, 50V, ± 20%
C20		ECCD1H070DC	Ceramic, 7pF, 50V, ± 0.5pF
C21		ECCD1H050CC	Ceramic, 5pF, 50V, ± 0.25pF
C22		ECCD1H220KC	Ceramic, 22pF 50V, ± 10%
C23, 24		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $\pm^{80}_{20}$%
C25		**ECEA50M4R7R**	Electrolytic, 4.7μF, 50V
C26		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $\pm^{80}_{20}$%
C27		ECKD1H102ZF	Ceramic, 0.001μF, 50V, $\pm^{80}_{20}$%
C28		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $\pm^{80}_{20}$%
C29		ECKD1H102ZF	Ceramic, 0.001μF, 50V, $\pm^{80}_{20}$%
C30		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $\pm^{80}_{20}$%
C31		ECCD1H040CC	Ceramic, 4pF, 50V, ± 0.25pF
C32		ECQM1H223KZ	Polyester, 0.022μF, 50V, ± 10%
C33		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $\pm^{80}_{20}$%
C34		**ECEA1HS100**	Electrolytic, 10μF, 50V
C35		ECQM1H223KZ	Polyester, 0.022μF, 50V, ± 10%
C50		ECCD1H220KC	Ceramic, 22pF, 50V, ± 10%
C101, 102		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $\pm^{80}_{20}$%
C103, 104		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $\pm^{80}_{20}$%
C105		**ECEA1HS100**	Electrolytic, 10μF, 50V
C106		**ECEA50Z3R3**	Electrolytic, 3.3μF, 50V
C107		**ECEA50ZR47**	Electrolytic, 0.47μF, 50V
C108		**ECEA1CS331**	Electrolytic 330μF, 16V
C109, 110		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $\pm^{80}_{20}$%
C201		ECQM1H223KZ	Polyester, 0.022μF, 50V, ± 10%
C202		ECQM1H473KZ	Polyester, 0.047μF, 50V, ± 10%
C203		ECCD1H070DC	Ceramic, 7pF, 50V, ± 0.5pF
C204		**ECEA50Z1**	Electrolytic, 1μF, 50V
C205		ECQS1241JZ	Polystyrene, 240pF, 125V, ± 5%
C206, 207		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $\pm^{80}_{20}$%
C208		ECQM1H472KZ	Polyester, 0.0047μF, 50V, ± 10%
C209		ECCD1H101K	Ceramic, 100pF, 50V, ± 10%
C210		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $\pm^{80}_{20}$%
C211		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $\pm^{80}_{20}$%
C212		ECCD1H820K	Ceramic, 82pF, 50V, ± 10%
C213		ECQM1H333KZ	Polyester, 0.033μF, 50V, ± 10%
C214		**ECEA50MR33R**	Electrolytic, 0.33μF, 50V
C215		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $\pm^{80}_{20}$%
C216		ECQM1H122JZ	Polyester, 0.0012μF, 50V, ± 5%
C217		ECCD1H560KC	Ceramic, 56pF, .50V, ± 10%
C219, 220		ECKD1H103MD	Ceramic, 0.01μF, 50V, ± 20%
C221		**ECEA1HS100**	Electrolytic, 10μF 50V
C222, 223		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $\pm^{80}_{20}$%
C226		ECCD1H070CC	Ceramic, 7pF, 50V, ±0.25pF
C227		ECKD1H102ZF	Ceramic, 0.001μF, 50V, $\pm^{80}_{20}$%
C230		ECCD1H680KC	Ceramic, 68pF, 50V, ± 10%
C301		ECQM1H182JZ	Polyester, 0.0018μF, 50V, ± 5%
C302		**ECEA50Z1**	Electrolytic, 1μF, 50V
C303		**ECEA50ZR1**	Electrolytic, 0.1μF, 50V
C304		**ECEA50Z1**	Electrolytic, 1μF, 50V
C305		ECQS1102JZ	Polystyrene, 0.001μF, 125V, ± 5%
C306, 307		ECQM1H223KZ	Polyester, 0.022μF, 50V, ± 10%
C308, 309		ECQM1H102KZ	Polyester, 0.001μF, 50V, ± 10%
C310, 311		ECKD1H471KB	Ceramic, 470pF, 50V, ± 10%
C312, 313	△	**ECEA50N1**	Non-polar Electrolytic, 1μF, 50V
C314		**ECEA1CS331**	Electrolytic, 330μF, 16V
C320		ECQM1H562KZ	Polyester, 0.0056μF, 50V, ± 10%
C401, 402		**ECEA50M3R3R**	Electrolytic, 3.3μF, 50V
C403, 404		**ECEA1AS101**	Electrolytic, 100μF, 10V
C405, 406		ECQM1H183JZ	Polyester, 0.018μF, 50V, ± 5%
C409, 410		ECQM1H472JZ	Polyester, 0.0047μF, 50V, ± 5%
C411, 412	△	**ECEA50N1**	Non-polar Electrolytic, 1μF, 50V
C413		**ECEA1VS101**	Electrolytic 100μF, 35V
C414		**ECEA1HS100**	Electrolytic, 10μF, 50V
C415, 416		**ECEA50Z1**	Electrolytic, 1μF, 50V
C417, 418		ECKD1H681KB	Ceramic, 680pF, 50V, ± 10%
C419, 420	△	**ECEA50N1**	Non-polar Electrolytic, 1μF, 50V
C421, 422	△	**ECEA50N1**	Non-polar Electrolytic, 1μF, 50V
C423, 424		**ECEA1ES470**	Electrolytic, 47μF, 25V
C501, 502		ECQM1H392KZ	Polyester, 0.0039μF, 50V, ± 10%
C503, 504		ECQM1H473KZ	Polyester, 0.047μF, 50V, ± 10%
C505, 506		ECQM1H333KZ	Polyester, 0.033μF, 50V, ± 10%
C507, 508		**ECEA50M1R**	Electrolytic, 1μF, 50V
C509, 510		ECCD1H390KC	Ceramic, 39pF, 50V, ± 10%
C511, 512	△	**ECEA50N1**	Non-polar Electrolytic, 1μF, 50V
C513, 514	△	**ECEA50N1**	Non-polar Electrolytic, 1μF, 50V
C515, 516		ECCD1H470KC	Ceramic, 47pF, 50V, ± 10%
C517, 518		ECQM1H472KZ	Polyester, 0.0047μF, 50V, ± 10%
C519, 520		ECQM1H123KZ	Polyester, 0.012μF, 50V, ± 10%
C521, 522		ECQM1H123KZ	Polyester, 0.012μF, 50V, ± 10%
C523, 524		ECQM1H393KZ	Polyester, 0.039μF, 50V, ± 10%
C525, 526		**ECEA1ES470**	Electrolytic, 47μF, 25V
C701		**ECEA1CS471**	Electrolytic, 470μF, 16V
C702		**ECEA1HS100**	Electrolytic, 10μF, 50V
C703	△	**ECEA50N1**	Non-polar Electrolytic 1μF, 50V
C704		**ECEA1HS100**	Electrolytic, 10μF, 50V
C705		**ECEA1HS221**	Electrolytic, 220μF, 50V
C706		**ECEA2AS331**	Electrolytic, 330μF, 100V
C707		**ECEA1JS330**	Electrolytic, 33μF, 63V
C708		**ECEA1JS471**	Electrolytic, 470μF, 63V
C709		**ECEA1HS100**	Electrolytic, 10μF, 50V
C710		**ECEA1JS471**	Electrolytic, 470μF, 63V
C711		**ECEA1HS100**	Electrolytic, 10μF, 50V
C713	△	ECKD1H103SE	Ceramic, 0.01μF, 50V, $\pm^{50}_{20}$%
C715		ECKD2H103PE	Ceramic, 0.01μF, 500V, $\pm^{100}_{0}$%
C790		**ECEA1AS221**	Electrolytic, 220μF, 10V
C901		ECCD1H270KC	Ceramic, 27pF, 50V, ± 10%
C903		**ECEA1VS330**	Electrolytic, 33μF, 35V
C904		**ECQM1H154KZ**	Polyester, 0.15μF, 50V, ± 10%
C906		**ECEA1HS100**	Electrolytic, 10μF, 50V
C907		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $\pm^{80}_{20}$%
C908		ECKD1H103ZF	Ceramic, 0.01μF, 50V, $\pm^{80}_{20}$%
C909		**ECEA1AS101**	Electrolytic, 100μF, 10V
C911		**ECEA0JS471**	Electrolytic, 470μF, 6.3V
C912		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $\pm^{80}_{20}$%
C915		**ECEA1ES101**	Electrolytic, 100μF, 25V
C916		**ECEA1ES220**	Electrolytic, 22μF, 25V
C917, 918		ECKD1H331KB	Ceramic, 330pF, 50V, ± 10%
C919, 920		ECKD1H331KB	Ceramic, 330pF, 50V, ± 10%
C921		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $\pm^{80}_{20}$%
C922, 923		ECKD1H331KB	Ceramic, 330pF, 50V, ± 10%
C924, 925		ECKD1H331KB	Ceramic, 330pF, 50V, ± 10%
C926, 927		ECKD1H331KB	Ceramic, 330pF, 50V, ± 10%
C928, 929		ECKD1H331KB	Ceramic, 330pF, 50V, ± 10%
C930		**ECEA1VS101**	Electrolytic, 100μF, 35V
C931, 932		ECKD1H331KB	Ceramic, 330pF, 50V, ± 10%
C933		ECKD1H331KB	Ceramic, 330pF, 50V, ± 10%
C934		**ECEA1CS330**	Electrolytic, 33μF 35V
C935, 936		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $\pm^{80}_{20}$%
C960		**ECEA50Z1**	Electrolytic, 1μF, 50V
C961		**ECEA50ZR47**	Electrolytic, 0.47μF, 50V
C962		**ECEA50Z1**	Electrolytic, 1μF, 50V
C963		**ECEA1HS100**	Electrolytic, 10μF, 50V
C964		**ECEA1AS221**	Electrolytic, 220μF, 10V
C968		ECKD1H102ZF	Ceramic, 0.001μF, 50V, $\pm^{80}_{20}$%
C971		ECKD1H223ZF	Ceramic, 0.022μF, 50V, $\pm^{80}_{20}$%
C973		ECKD1H102ZF	Ceramic, 0.001μF, 50V, $\pm^{80}_{20}$%
C990 [XA only]		ECKD1H102ZF	Ceramic, 0.001μF, 50V, $\pm^{80}_{20}$%

■ CHANGE OF PARTS LIST

ST-K808K (DX), (DM), (XSW), (EB), (XGH)

NOTES:
1. This parts list included only the changes of the model ST-K808 parts list.
2. (DX) is available in Scandinavia and European except Switzerland and Denmark.
   (DM) is available in Denmark.
   (XSW) is available in Switzerland.
   (EB) is available in Belgium.
   (XGH) is available in Holland.

Ref. No.	Chage of Part No.		Part Name & Description
	ST-K808	➡ ST-K808K	
	CABINET and CHASSIS PARTS		
1	SBN877	SBN877-1	Knob, Volume
2	SYW245 SYW257 [XA] only	SYW247	Panel, Front Ass'y
6	SBC253	SBC253-1	Button, Push Switches
9	SQX4737	SQX4749	Label, Operation
10	SYETK808D	SYETK808KD	Orrament, FL
12	SBC255	SBC255-1	Button, Push Door
14	SBS5	SBS5-1	Knob, Program mode
15	SBN875-1	SBN875-2	Knob, Balance, Treble and Bass
34	SKC190H	SKC190B	Cabinet
	SCREWS and WASHERS		
(71)	XTB4+8BFN	XTB4+8BFZ	Screw, Cabinet
	PACKING PARTS		
P1	SPG2347 SPG2345 [XE, XA]	SPG2353	Carton Box
P6	SQF10337-1 SQF10339 [XE, XA] SQF10337 [XGH]	SQF10337 [EB, XGH] SQF10337-1 [DX, DM, XSW]	Instructions Book, Printed Matter

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8001780